

ARS PRAEHISTORICA
COMMEMORATING
NIKOLA TASIĆ'S LEGACY
IN BALKAN ANTIQUITY

Edited by Vladimir P. Petrović



Belgrade 2026

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VLADIMIR P. PETROVIĆ





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Edited by
Vladimir P. Petrović

Editor in chief
Vojislav G. Pavlović
Director of the Institute for Balkan Studies SASA

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Academician Nikola Tasić served as the Head of the SASA Center in Kragujevac from 1997 to 2010, succeeding Dragoslav Srejskić. His distinguished reputation and institutional influence significantly affirmed the Center's standing within both the Academy and the University. Tasić's tenure was marked by the establishment of the Dragoslav Srejskić Memorial and a prolific publishing output of 35 works. Critically, he provided vital support for the Bioengineering Program, which secured institutional stability in 2005 and evolved into the independent BioIRC in 2010. As the Center's longest-serving director, Tasić was instrumental in transforming it into a vital hub for multidisciplinary research and international cooperation.

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Academician Nikola Tasić and the Prehistory of the Central Balkans

It was my distinct honor to compose the introductory text for the collection of papers dedicated to Academician Nikola Tasić (1932–2017), an eminent figure and towering authority in Serbian and Yugoslav archaeology. The very mention of Academician Nikola Tasić evokes associations with the great triad of Serbian prehistorians, which, alongside him, included Milutin Garašanin and Dragoslav Srejović. Together with contemporaries such as Vladislav Popović and Bogdan Brukner, this generation epitomized what may rightly be termed the golden age of Serbian archaeology, both within the Serbian Academy of Sciences and Arts and in the broader scholarly domain. To summarize the scholarly opus and



intellectual legacy of Academician Nikola Tasić within the confines of a single text is an almost impossible task. His career, spanning over half a century, was not merely a succession of publications and excavations, but a foundational enterprise—constructing the very framework upon which the modern understanding of the prehistory of Southeastern Europe continues to rest. As an archaeologist, a synthesizer of knowledge, director of the Institute for Balkan Studies of the Serbian Academy of Sciences and Arts and the National Museum in Belgrade, and vice-president of the Academy itself, Nikola Tasić embodied an institution in his own right: a scholar who mastered empirical data while also possessing the rare capacity to discern major historical processes within the multiplicity of cultural fragments. His legacy endures, crystallized around several pivotal contributions:

Establishing the Eneolithic as a Defining Prehistoric Epoch

If one epoch were to be identified as central to Tasić's scholarly endeavors, it would unquestionably be the Eneolithic (Copper Age). At a time when evidence of this transitional period remained fragmentary and dispersed, Tasić was the first to comprehensively define and systematize the Eneolithic cultures spanning the territory from Pannonia to the Aegean. His seminal works, including the monograph *Eneolithic Cultures of the Central and Western Balkans* (1995) and his contributions to *Prehistory of the Yugoslav Lands (Eneolithic)*, established the foundation for the study of this epoch. He meticulously delineated the cultural-chronological relationships among the Baden, Kostolac, and Vučedol cultures, formulating a relative and absolute chronology that retains validity today. Beyond mere description of material finds, Tasić undertook profound analyses of the social, economic, and spiritual transformations accompanying the advent of metallurgy. In so doing, he transformed the Eneolithic from a nebulous archaeological abstraction into a vibrant and dynamic historical period. His insights into early metallurgy illuminated not only a technological revolution, but also a catalyst for pronounced social stratification.

Field Archaeology and Gomolava as a Chronological Benchmark

Academician Tasić was, above all, a consummate field archaeologist. In the era of his early career, to be an archaeologist meant to conduct regular

fieldwork and direct one's own excavations multiple times each year. At merely twenty-three, shortly after graduating, he led excavations at the Neolithic sites of Žitkovac and the renowned Valač in present-day Kosovo and Metohija. Thereafter, he investigated numerous sites, among them Zlotska Cave in eastern Serbia, Gologlava and Crnokalačka Bara near Kruševac, Belegiš in Srem, the Eneolithic tumulus near Batajnica, and, most prominently, the long-term systematic excavations of Gomolava near Hrtkovci and Gradina on the Bosut, as well as the eponymous Vinča.

Tasić's methodological rigor is most clearly exemplified at Gomolava. This multilayered site, with an almost uninterrupted cultural sequence from the late Neolithic to the Roman period, emerged under his direction as one of the foremost prehistoric sites in Europe. Through meticulous stratigraphic excavation and detailed analysis of movable material, he established a robust chronological framework for the South Pannonian region. His research at Gomolava and at other Neolithic settlements such as Crnokalačka Bara and Žitkovac set methodological standards for excavating multilayered sites and provided invaluable training grounds for successive generations of archaeologists.

Synthesizing Paleo-Balkan Migrations and Ethnogenetic Processes

With his deep expertise in the Eneolithic and Bronze Age, Tasić ventured into one of the most challenging questions of European prehistory: the Indo-European migrations and the ethnogenesis of Paleo-Balkan peoples. He was among the few who endeavored to link archaeological cultures—such as Vučedol and Yamnaya—with the arrival of the earliest Indo-Europeans in the Balkans. His interdisciplinary approach, interweaving archaeological evidence with linguistic analysis and scarce textual references, is evident in works such as *Some Reflections on the Migrations of Palaeo-Balkan Peoples*. In this manner, he elevated prehistoric archaeology to the level of paleoethnology, illuminating processes in the formation of the Illyrians, Thracians, and Dardanians at the threshold of history.

Defining Cultural Transitions and Regional Networks

Perhaps the most complex of Tasić's works is *The Yugoslav Danube Region from the Indo-European Migrations to the Scythian Invasions* (1983).

Spanning millennia—from 3700 to 500 BCE—this monograph eschews the conventional culture-by-culture approach in favor of synthesizing phenomena, movements, processes, interactions, and the dissolution of populations into a coherent, dynamic narrative. Richly illustrated, it broke with domestic archaeological tradition by integrating images throughout the text rather than relegating them to an appendix. This volume was arguably more demanding to produce than any contribution to the *Prehistory of the Yugoslav Lands* series, and it testifies to Tasić's scholarly mastery. Beyond this, his precise definition of the Belegiš and Bosut cultures remains a cornerstone of Balkan archaeology. He transcended the boundaries of individual epochs, delineating the cultural zones of the Balkans—Danubian, Central Balkan, and Adriatic—and tracing their transformations from the Neolithic through the Iron Age. His analyses of the transitions from Neolithic to Eneolithic, and later to the Iron Age under the influences of the Urnfield culture and the Bosut-Bessarabian complex, situated the Balkans not as a periphery, but as a dynamic cross-roads of cultural interaction from the steppes, Central Europe, and the Aegean.

Institution Builder and Mentor to Generations

Tasić's scholarly achievements cannot be separated from his role as an institution builder. As long-time director of the Institute for Balkan Studies of the Serbian Academy of Sciences and Arts, he developed it into a leading center for interdisciplinary research on the Balkan past. Through organizing international conferences and holding senior positions within the Academy, he secured for Belgrade and Serbia a prominent place on the global archaeological map. Under his mentorship, a generation of distinguished Serbian archaeologists emerged, ensuring continuity of intellectual traditions and advancing the discipline further.

Equally noteworthy is Tasić's role in re-establishing the Serbian Archaeological Society after the Second World War, later serving as its president, as well as presiding over the Archaeological Society of Yugoslavia. He was also editor of *Archaeological Review* and of the renowned journal *Archaeologia Iugoslavica*.

His professional trajectory began in the museum sector, first in Kragujevac and subsequently at the Zemun Museum, which later merged with the Belgrade City Museum. From 1968, he devoted himself to the

Institute for Balkan Studies, where he remained until the end of his career. He also served as director of the National Museum in Belgrade (2001), shortly after being elected a full member of the Serbian Academy of Sciences and Arts. Though already established, he undertook this role out of commitment to strengthening Serbia's central museum institution during a period of societal and political turbulence. His museological achievements include the landmark exhibitions *Archaeological Treasures of Kosovo and Metohija* and *Golden Belt of Kosovo and Metohija* (1998), which transferred the most significant artifacts from the region to Belgrade.

Collegiality and the Art of Scholarly Diplomacy

Nikola Tasić was also renowned for his collegiality and gift for fostering positive scholarly relationships. Though he occasionally disagreed with Milutin Garašanin on specific issues, the two ultimately forged a lasting friendship, and Tasić took a leading role in the *Hommage* dedicated to Garašanin. Following the death of his close colleague Dragoslav Srejskić, he initiated and organized the first memorial gatherings in his honor, ensuring their proceedings were published. Tasić's reputation extended far beyond Serbia; his collaborations with international museums, universities, and institutes were extensive, and his openness and intellectual breadth secured him membership in several European and global academies. He consistently leveraged his international stature to benefit Serbian archaeology and its practitioners.

* * *

Academician Nikola Tasić was a synthetic thinker, capable of perceiving in fragments of pottery the movements of peoples, and in the evolution of a vessel's form the profound transformations of society. His work was more than an accumulation of data; it served as a model for studying the past comprehensively, interdisciplinarily, and with vision. His legacy remains the foundation upon which future knowledge of Balkan prehistory will be built. Though his passing left a void, his intellectual contributions and institutional achievements continue to shape the field, embodying scholarly rigor and the integration of archaeology within broader cultural and historical contexts.

I first met Academician Tasić in the late 1970s, in my youth. Even then, his gentleness, cheerful spirit, and paternal warmth were evident, combined with an unobtrusive authority that inspired confidence and security in those around him.

In the early 2000s, as part of a younger generation of scholars, I experienced firsthand the trust and encouragement he extended to others. This trust was both a privilege and an obligation—to pursue one's work with purpose, integrity, and optimism. He celebrated achievements, whether institutional or personal, with genuine pride, and remained steadfast in his principles, even under difficult circumstances.

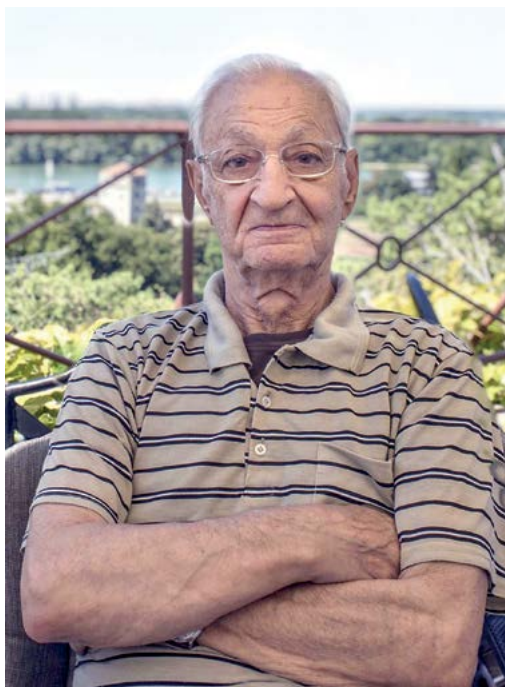
As a leader, he exemplified the highest ideals: valuing every contribution, respecting collaborators, and pursuing ideas of lasting significance without yielding to transient obstacles. Personal fulfillment and scholarly achievement were inseparable for him, and he inspired others to maintain that balance.

Academician Tasić was, in every sense, a man of noble character and selfless devotion: a loyal friend, profoundly wise yet modest, a true intellectual—erudite, versatile, refined, and courteous. At the same time, he was an engaged and sincere patriot. To all who knew him, he remains an enduring exemplar of integrity, humanity, and intellectual stature.

Vladimir P. Petrović

Nikola Tasić – in person

Nikola, the youngest of three children, was born in January 1932 in the home of Obrad Tasić, a customs official and bon vivant of Vlach origin. The Tasić family originated from the village of Preobraženje in South Serbia, a place from which a large number of Vlachs who have built their careers as academics, scientists, professors, doctors and similar professionals originated. By the end of the 19th century the family relocated to the nearby town of Vranje under the family nickname



“Babadudinci”. Coincidentally, Nikola was born in Belgrade, where his father was stationed at the time. As a government employee, his father was sent to serve in various towns across Serbia, and thus, Nikola frequently moved with the family, adapting to new environments and constantly meeting new people. This upbringing evidently had a lasting impact on his personality, making him communicative and open to new acquaintances and friendships.

Nikola’s educational journey began with what became an amusing family anecdote: as a five-year-old he desperately wanted to tag along his sister Ljiljana, two years his elder, to her first day in school and ended up being admitted himself, thus starting his life-long education at such a

young age on that same day. From that point on, as the family moved across the state, he attended schools in Knjaževac, Prilep, Kragujevac, and Belgrade. His mother, Vera, originally from Srbobran, Vojvodina and a member of the renowned Brankovan family, joined the Tasić family directly from the Subotica High School for Girls, becoming a firm pillar of the household in charge of order, discipline, and rather strict upbringing of the children.

Nikola Tasić's studies in archaeology began after spending a few semesters at the Faculty of Mathematics. Legend has it that he once encountered his high school friend Dragoslav Srejski, who was so enthusiastic about his experiences at the Department of Archaeology. Srejski's fascination evidently rubbed off on Nikola, who subsequently enrolled in the Faculty of Philosophy. His studies in archaeology progressed swiftly, and in less than fifteen years, he transitioned from a freshman to a doctor of science. He specialised in prehistoric archaeology, with much of his published work dedicated to cultures of the Metal Ages. Throughout his professional and scientific career, he engaged in various aspects of archaeology, from protective excavations spanning different periods to extensive multi-year systematic excavations at sites like Belegiš, Gomolava, Bosut and Vinča.

From his early works dedicated to the results of numerous excavations he led, through his doctoral dissertation on the Baden and Vučedol cultural complex in Yugoslavia, in his mature years, Nikola Tasić shifted his focus toward understanding and interpreting the chronological relationships among cultural phenomena in southeastern Europe. Subsequently, he delved into deciphering the origins and disappearances of different cultural phenomena, as well as tracing the origins and consequences of migratory movements during prehistory. He embraced new scientific methods and genuinely appreciated interdisciplinary approaches, as evidenced by the handbook on Archaeological Research Methodology that he co-authored with Borislav Jovanović.

His working career, which actually spanned from 1954 to 2014, a full sixty years, unfolded across several institutions. After completing his bachelor degree and compulsory military service, he worked at the National Museum in Kragujevac, followed by the local Museum in Zemun, and then the Belgrade City Museum. His scientific career culminated at the Institute for Balkan Studies of the Serbian Academy of Sciences and

Arts where he also served as director for more than a decade. However, his professional journey didn't end officially with his formal retirement in 2003. He took great pride in being appointed as the director of the National Museum in Belgrade. He was excited to contribute to reintroducing our culture to international audiences and revitalising international cooperation after many years of isolation and neglect. With genuine passion, he prepared for participation in various formal events organised at the National Museum during those years. After leaving the post at the National Museum, he dedicated himself to challenging yet stimulating roles within the Serbian Academy of Sciences and Arts, serving as both the general secretary and vice president.

The best part of his life, Nikola Tasić has spent with Vera, née Marković, his neighbourhood sweetheart and life long partner. Their love and companionship blossomed for a remarkable 62 years. They lived harmoniously, complementing each other's contrasting personalities, and their favourite shared activity was embarking on numerous journeys across Europe.

The inner peace, relaxed nature, and composure of Nikola Tasić extended not only to immediate family members—his wife Vera and son Nenad—but also to a diverse circle of friends. Another group of friends consisted of colleagues—archaeologists with whom he crossed paths and socialised during excavations, joint projects, various social forums, and congresses. Among them were Bogdan Brukner (Nikola was the best man at his wedding), Dragoslav Srejskić (who was the best man at Nikola's wedding), Borislav Jovanović, Jovan Todorović-Đovani, Stojan Dimitrijević, as well as younger colleagues like Petar Popović, Mirjana Vukmanović, Kemal Ljuci, Svetlana Perišić, Blagoje Govedarica, Vladimir Stančić, Svetlana Lazić, and many others.

Although foreign languages were not Nikola's strong suit, he managed to communicate not only in German but also in French with considerable mutual enthusiasm. However, that was sufficient enough to establish and maintain numerous friendships with foreign colleagues who shared a strong passion for the Metal Ages of southeastern Europe. Over several decades, they regularly convened at symposia dedicated to those topics. A few of them, all well known and established prehistorians of his generation, will be mentioned here, such as Juraj Pavuk, Nándor Kalicz, Pál Raczky, Alessandra Aspes, Jan Novotný, and Ruth Tringham.

Beyond being a respected and established archaeologist, prehistorian, academic and cherished friend, Nikola Tasić was a gentle and devoted father. His relationship with his son, his only child, could best be characterised as an ideal blend of warm parenting and sincere friendship, devoid of any coercion or punishment, without transactional arrangements. Based on personal experience, the undersigned believes that the outcome of such upbringing justifies adding one more title to Nikola's resume, perhaps the most significant one.

Nenad N. Tasić

Dušan Mihailović*

*Department of Archaeology,
Faculty of Philosophy, University of Belgrade
Belgrade, Serbia*

Studies of Middle Palaeolithic variability in the Balkans: an overview of recent interpretations**

Abstract: This paper offers a critical examination of recent research on the variability of Middle Palaeolithic lithic industries across the Balkans, aiming to delineate realms of consensus and areas of divergence in scholarly perspectives. Regarding diverse approaches to analysing and interpreting Middle Palaeolithic industries, it has been concluded that the technological variability in the Middle Palaeolithic of the Balkans cannot be adequately assessed solely through knapping methods. In the Balkans, the main knapping methods (Levallois, Quina, discoid) appeared as early as MIS 7/6 and were simultaneously used throughout the entirety of the Middle Palaeolithic. Hence, we believe that future studies should focus on examining all potential factors that could have influenced the variability of spatially and temporally defined technocomplexes, including analyses of climatic and ecological changes, raw material distribution, and population movements.

Key words: Middle Paleolithic, lithic artefacts, industrial variability, Balkans

Introduction

Research on the Middle Palaeolithic in the Balkan peninsula has significantly intensified over the last couple of decades. In Croatia, de-

* dmihailo@f.bg.ac.rs

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tailed surveys and excavations have been conducted at sites in the Adriatic zone and the hinterland. Many sites have been investigated in Serbia,¹ while in Greece research has focused on the Peloponnese.² Field surveys and excavations of Middle Palaeolithic sites have also begun in North Macedonia and Albania,³ while in Bulgaria and Montenegro excavations of some key sites, such as Bacho Kiro and Crvena Stijena, have continued.⁴ The results of recent research, including newly obtained dates, have for the first time shed some light on the variability of lithic industries across the entire Balkan region (Fig. 1), in all phases of the Middle Palaeolithic.

The issue of variability in Middle Palaeolithic industries has mostly been addressed within national or narrow regional contexts, frequently within the scope of analysing specific sites. However, several studies that encompassed the entire Balkan region have been published recently: the work by T. Dogandžić on the variability of Middle Palaeolithic industries,⁵ I. Karavanić and M. Banda's study on the Middle Palaeolithic of South-eastern Europe,⁶ the work of D. Mihalović and collaborators on the issue of refugia,⁷ and R. Ruka and colleagues' study on discoid technology.⁸ While these studies provide comprehensive overviews of the Middle Palaeolithic in the Balkans, the authors have taken diverse approaches in examining the variability of Middle Palaeolithic industries, resulting in varying conclusions. Considering all of this, we believe now is the right moment to juxtapose the methodologies, observations, and conclusions of various authors and offer a comprehensive picture of the spatial and temporal variability of Middle Palaeolithic industries in the Balkans. Additionally, it is crucial to distinguish between reliable findings and hypotheses that still require evidence.

¹ Mihailović 2014.

² Tourloukis & Harvati 2018.

³ Šalamanov-Korobar 2008; Stojanovski, Arzarello & Nacev 2018; Ruka et al. 2023 preprint.

⁴ Whallon 2017; Hublin et al. 2020; Dogandžić 2023.

⁵ Dogandžić 2023.

⁶ Karavanić & Banda 2023.

⁷ Mihailović, Mihailović & Whallon, in press.

⁸ Ruka et al. 2023 preprint.

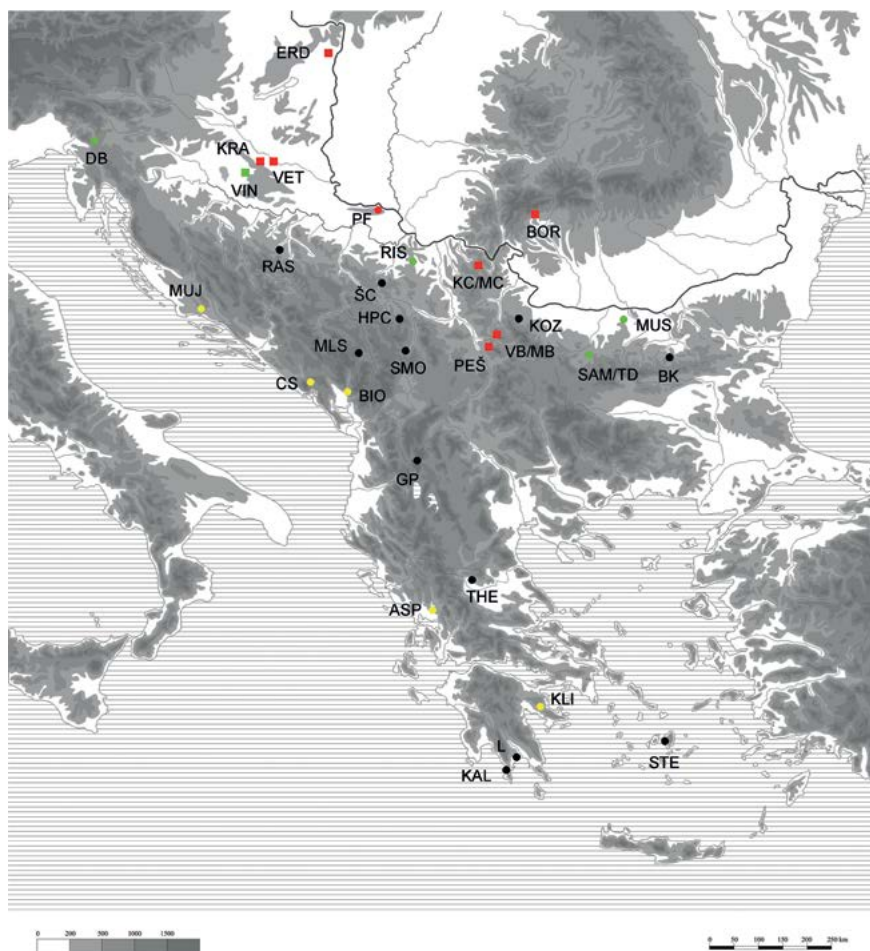


Figure 1. Middle Paleolithic sites in Southeastern Europe: Divje Babe (DB), Erd (ERD), Krapina (KRA), Veternica (VET), Vindija (VIN), Mujina Cave (MUJ), Rastuša (RAS), Crvena Stijena (CS), Bioče (BIO), Mališina Stijena (MLS), Petrovaradin Fortress (PF), Risovača (RIS), Šalitrena Cave (ŠC), Hadži Prodanova Cave (HPC), Smolučka Cave (SMO), Cioarei-Borosteni Cave (BOR), Kozja and Mala Cave (KC/MC), Velika and Mala Balanica (VB/MB), Pešturina (PEŠ), Samuilca II and Temnata Dupka (SAM/TD), Muselievo (MUS), Bacho Kiro (BK), Golema Pesht (GP), Asprochaliko (ASP), Theopetra (TEO), Kalamakia (KAL), Lakonis (L), Klissoura (KLI), Stelida (STE). Sites with Charentian assemblages are marked in red, sites with the Typical Mousterian assemblages in black, sites with leaf points in green, and sites attributed to the Micromousterian in yellow.

Baseline assumptions

Until recently, there has been little discussion on the variability of the Middle Palaeolithic of the Balkans, which is understandable given the limited number of sites and published data. With the increased number of these studies, questions have arisen regarding the relationship to research traditions, as well as the denomination of Middle Palaeolithic technocomplexes. Similar to Mihailović,⁹ Karavanić and Banda maintained a simplified terminology for Middle Palaeolithic technocomplexes, emphasising that no direct parallels can be drawn between Balkan industries and those in Western Europe.¹⁰ Meanwhile, Dogandžić has highlighted the need to “deconstruct the typological groups”, and decided to present the variability of Middle Palaeolithic industries in the Balkans almost exclusively from a technological perspective.¹¹ Ruka and colleagues adopted a similar approach in their study on discoid technology.¹²

Undoubtedly, the utilisation of named stone tool industries – referred to as “NASTIES” by J. J. Shea – when studying the Middle Palaeolithic of the Balkans poses an issue, and there are specific reasons for this.¹³ It has long been recognised that F. Bordes’ classification of Mousterian industries cannot be applied to the Balkans, and that this region presents specific manifestations of Middle Palaeolithic technology.¹⁴ As a result, many authors have resorted to alternative and often locally specific names such as Levallois Mousterian, Balkan Mousterian, Mousterian of the Crvena Stijena type, and so on.¹⁵ However, it is important to emphasise that Bordes’ approach never gained popularity in the Balkans, and that the typological approach to studying Middle Palaeolithic assemblages had been abandoned as early as the 1980s. An exception to this is represented by attempts to apply Bordes’ criteria for formal comparisons of Balkan assemblages with those from sites in other parts of Europe.¹⁶

⁹ Mihailović 2014.

¹⁰ Karavanić & Banda 2023.

¹¹ Dogandžić 2023.

¹² Ruka et al. 2023 preprint.

¹³ Shea 2014.

¹⁴ Bordes 1953; Mihailović 2009; Mihailović 2014.

¹⁵ See overview in Dogandžić 2023.

¹⁶ Ivanova 1979; Sirakov 1983; Mihailović 2009.

There is no dispute that the technological approach represents the sole means to identify Middle Palaeolithic facies, regardless of whether they belong to the Quina or some other Mousterian type. That is why, in our previous work,¹⁷ we approached Quina assemblages not only from a typological standpoint, but also from a technological perspective. Additionally, detailed technological analyses have been conducted in the majority of studies concerning the Middle Palaeolithic of the Adriatic–Ionian coastal zone. However, it remains uncertain to what extent the spatial and temporal variability in the Middle Palaeolithic of the Balkans can be understood solely through the lens of knapping methods, considering that the complex character of lithic industries is also manifested in other technological domains. Hence, we believe that naming the spatially and temporally delimited technological facies remains a necessary step. This issue, however, extends beyond the study of lithic industries solely within the Middle Palaeolithic and exclusively within the Balkan region, and it is present in the study of the Palaeolithic in other parts of Europe as well.¹⁸

Variability of industries in the early Middle Palaeolithic (MIS 9–6)

Initial insights into the variability of industries from the early Middle Palaeolithic were provided by research conducted at the Balanica cave complex (Serbia), and the Kozarnika cave (Bulgaria). Within the artefact assemblage from layer 3 of Velika Balanica, and layer 2 of Mala Balanica – dating back to 290–240 ka – Quina technology is evident both in the knapping method and in terms of tool variability.¹⁹ In both Balanica caves, cores of the Quina type (such as salami slice, cortical backed, and alternate cores), and characteristic knapping products (naturally backed knives, etc.), have been identified. Among the tools, numerous Quina sidescrapers, exhibiting up to three levels of retouch, have been documented (Fig. 2). Levallois artefacts have not been identified.

The earliest reliable evidence for the usage of Levallois technology comes from layer 10b of the Kozarnika cave, dating back to MIS 6.²⁰ A potentially older record of Levallois technology comes from the open-air

¹⁷ Mihailović et al. 2022a; Mihailović et al. 2022b.

¹⁸ Pesesse 2017; Frick 2020.

¹⁹ Mihailović et al. 2022a.

²⁰ Tillier et al. 2017.

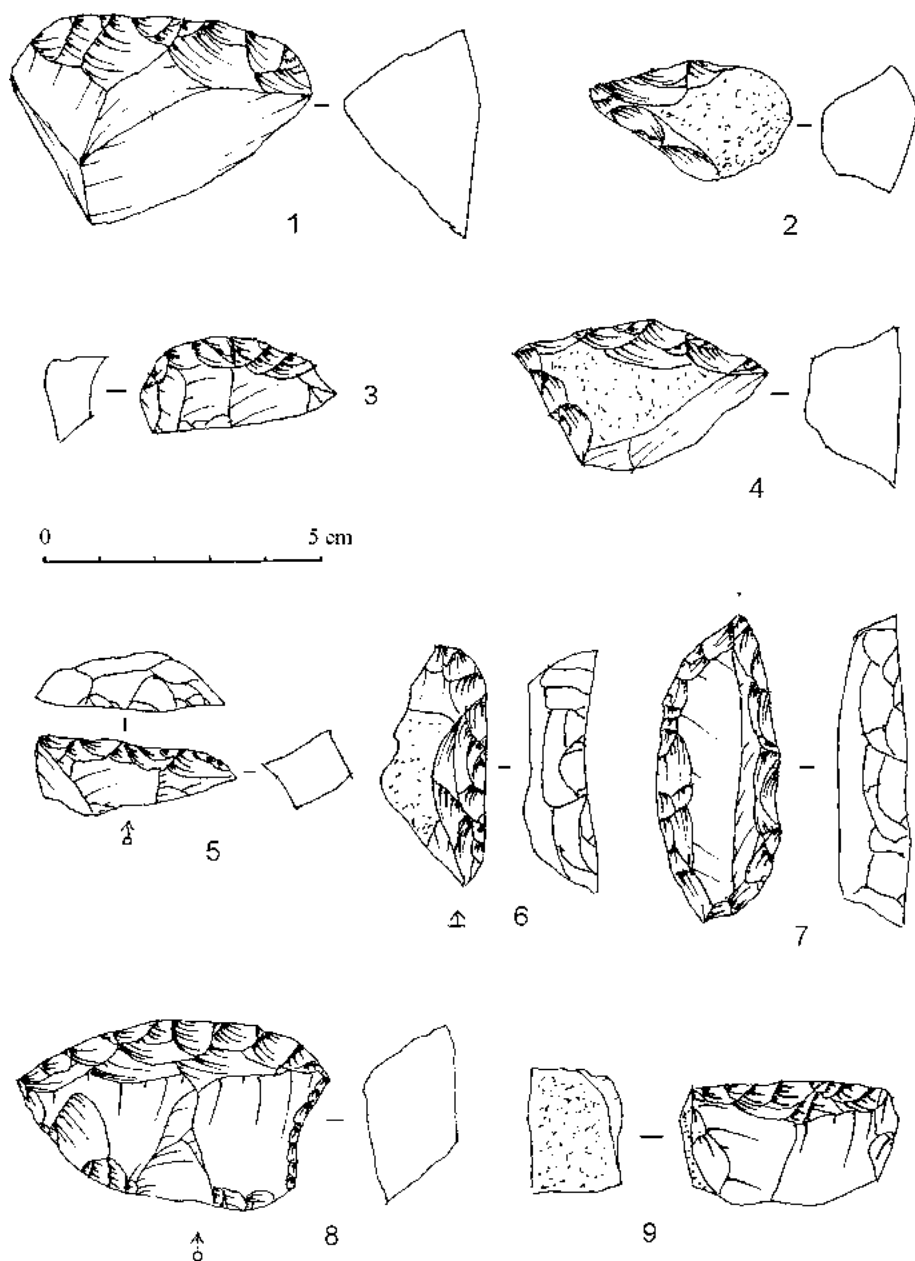


Figure 2. Sidescrapers (1–5) and limace (6) from layer 3 of Velika Balanica and sidescrapers from layer 2 of Mala Balanica (8–9).

site of Mamaia Sat (Dobruja, Romania), dated to the Marine Isotope Stages (MIS) 9–7 via stratigraphic correlations of the artefact-bearing layers with the loess-paleosol sequences in the Danube delta.²¹ Layer 2 at Velika Balanica, which also contains Levallois artefacts, has been dated using the ESR method to MIS 7–6 (Anne R. Skinner, pers. comm.), but the artefacts from this layer, as well as the ESR dates, have not yet been published. Other potentially early records of Levallois technology come from the deepest layers (XXXI–XXV) of Crvena Stijena in Montenegro – which have not been dated yet – and from the surface lithic scatters documented in the West Morava valley, central Serbia.²²

Bifacial artefacts have been documented at just a handful of sites. At the open-air site of Kokkinopilos in Epirus (Greece), one “Micoquian” biface and one backed biface have been found, yet the question of attributing these artefacts remains unresolved: Runnels and Van Andel suggest they could be linked to Acheulean,²³ while Galanidou and colleagues highlight that they might be more closely associated with the Keilmesser group industry.²⁴ Bifacial artefacts have also been discovered at Kozarnika cave (layer 10b) and the Mamaia Sat site.²⁵

Variability of lithic industries in the middle phase of the Middle Palaeolithic (MIS 5)

Similar to earlier periods, Quina-type industries – referred to as the Charentian of South-eastern Europe – and industries with a more or less prominent Levallois component (i. e., the Typical Mousterian) appear during MIS 5 in the Balkans, while backed bifacial artefacts have been documented at the Petrovaradin fortress Palaeolithic site in Novi Sad (Vojvodina, Serbia). It is difficult to establish connections between these and earlier industries, given the limited number of dated sites from MIS 6.

The so-called Charentian of South-eastern Europe is best defined among the mentioned lithic industries, and has been confirmed at multiple sites in Hungary (Érd), Slovenia (Betanov Spodmol), Croatia (Krap-

²¹ Balescu, Tuffreau & Dobrescu 2015.

²² Михайлович 2017; Mihailović, Milošević & Radović 2014.

²³ Runnels & van Andel 1993; Tourloukis, Karkanis & Wallinga 2015.

²⁴ Galanidou, Papoulia & Ligkovanlis 2016.

²⁵ Tillier et al. 2017; Balescu, Tuffreau & Dobrescu 2015.

na, Veternica, and Vindija caves), Serbia (Pešturina cave, and likely at the Petrovaradin fortress site), and Romania (Cioarei–Borosteni cave).²⁶ These sites are located on the southern edge of the Pannonian basin and in the peri-Pannonian region, including the South Morava valley in Serbia. Levallois technology is undoubtedly present within the Charentian and appears to be more prominent in knapping techniques than in the tool repertoire – especially when it comes to the prevalence of classic Quina side-scrapers.²⁷ In addition to the Quina method *sensu stricto*,²⁸ alternative knapping methods were also used: the discoid and the so-called cobble wedge methods.²⁹ Quartzite pebbles were most commonly used for knapping, but pebbles from other raw materials (e. g. Krapina) were also utilised. Levallois artefacts have been documented at the majority of sites as well.

Typical Mousterian, characterised by a less pronounced Quina component, has been documented at several sites across the Balkans: Crvena Stijena in Montenegro; Zobište in Bosnia and Herzegovina; and Asprochaliko, Kalamakia, and Klissoura in Greece.³⁰ In contrast to the Theopetra cave (Greece), where the Quina component is somewhat more evident,³¹ these assemblages generally exhibit a limited presence of Quina artefacts, while artefacts obtained through the application of preferential and recurrent methods occur within the Levallois products. Despite the increased occurrence of blades in certain assemblages,³² there is no evidence of systematic production of this type of blanks.

Two backed bifacial tools have been found at the Petrovaradin fortress: one was found in layer (2b) dated to around 90,000 years ago, and the other at the contact level between layers 2b and 2a.³³ Foliates have also been identified in unreliably dated layers of Kozarnika and Temnata caves (Bulgaria), as well as at numerous open-air sites (e. g. Kamen in Bosnia and Herzegovina, Shiroka Polyana in Bulgaria, and Megalo Karvounari in Greece) which lack absolute dates.³⁴

²⁶ Gábori, 1976; Kozłowski, 2016; Osole 1991; Simek & Smith 1997; Cărciumaru et al. 2002; Mester & Moncel 2006; Mihailović 2009, Mihailović 2022b; Banda & Karavanić 2019.

²⁷ Mihailović et al. 2022b.

²⁸ Turq 1989; Bourguignon 1996.

²⁹ Peresani 2003; Simek & Smith 1997.

³⁰ Baumler 1988; Михайлович 2017; Tourloukis & Harvati 2018.

³¹ Panagopoulou 1999; Darlas 2007.

³² See the overview by Dogandžić 2023.

³³ Mihailović, 2009; Marković et al. 2020.

³⁴ Basler 1963; Galanidou, Papoulia & Ligkovanlis 2016; Taneva 2021.

Variability of the late Middle Palaeolithic (MIS 4 and 3) industries

In examining the chronology and spatial–temporal variability of lithic industries, MIS 4 and 3 stand out for their considerable complexity. Currently, only the assemblages from layers XXII–XX of Crvena Stijena, layer 6 of Temnata cave, and the lower layers (6e–6d) of Šalitrena cave (western Serbia) can be linked to MIS 4.³⁵ However, the dates associated with these layers span beyond just MIS 4, and include the end of MIS 5, and the start of MIS 3. Likewise, only a handful of sites were reliably dated to MIS 3, including Crvena Stijena (layers XVIII–XII) and Mujina cave (Montenegro), Bacho Kiro, possibly the layer 5pg of Temnata,³⁶ and the upper layer 5b (6a) of Šalitrena cave,³⁷ as well as several sites in Greece (Klissoura, Lakonis, etc.).³⁸ This picture becomes even more complex due to the presence of Upper Palaeolithic elements in assemblages from certain sites, and by the fact that many sites (e. g., Velika Pećina in Kličevica, Bioče, Hadži Prodanova cave, Pešturina cave) have produced inconsistent and late dates that remain unverified.³⁹

An important issue that arises is whether lithic industries attributed to the Central European Charentian also emerged during this period. Among the sites on the southern fringes of the Pannonian basin, artefacts from the Cioarei–Borosteni cave in Romania, the upper layers of Petrovaradin fortress and, more recently, artefacts unearthed from layer 3 of Pešturina cave, have been linked to this complex – with the Pešturina finds initially attributed to the Denticulate Mousterian based on a limited sample.⁴⁰ However, only radiocarbon dates are available for Cioarei–Borosteni,⁴¹ the artefact-bearing layers at Petrovaradin fortress are difficult to correlate with the dates available for another sector,⁴² while in the case of Pešturina, it should be noted that a reliable chronology of layer 3 has not been established yet. Regarding technology, the assemblages from all these sites unmistakably align with the Central European Charentian,

³⁵ Bluszcz et al. 1992; Mercier et al. 2017; Daković et al. 2019.

³⁶ Ginter & Kozłowski 2011.

³⁷ Marín-Arroyo & Mihailović 2017.

³⁸ Turloukis & Harvati 2018.

³⁹ Pavlenok et al. 2017; Alex et al. 2019; Karavanić & Banda 2023.

⁴⁰ Михаиловић & Милошевић 2012.

⁴¹ Cărciumaru et al. 2002.

⁴² Marković et al. 2020.

except for Petrovaradin fortress, where Quina elements are not particularly prevalent.

In the Adriatic coastal region, previous observations have indicated the presence of Quina artefacts at certain sites, within layers dating back to MIS 4 and the early stages of MIS 3. These are layers XXII–XX of Crvena Stijena, Klissoura cave, and De Nadale and Fumane caves (layers BR4, BR5–BR6) located in the northern Adriatic region.⁴³ Yet, Karavanić and Banda have recently assigned a range of sites previously categorised under different Mousterian types to the Charentian.⁴⁴ We will address this issue later.

The generic or, more accurately, the “Typical” Mousterian, embodies the most prevalent facies in the Balkans during MIS 3, particularly if we incorporate the industries attributed to the so-called Micromousterian. If we consider only dated sites, materials attributed to this type of Mousterian can be found in layer 6a of Šalitrena cave (Fig. 3),⁴⁵ layer XII of Bacho Kiro and Temnata,⁴⁶ and in the coastal region (where they are linked to Micromousterian) within layers XVIII–XII of Crvena Stijena,⁴⁷ and the upper layers of Bioče, Klissoura, and Asprochaliko.⁴⁸

Most assemblages in the Adriatic–Ionian zone are dominated by discoid components, alongside the occurrence of Levallois artefacts. Cores on flakes – including Kombewa cores – are frequent, while pseudo-Levallois flakes dominate among the products of knapping. Blade cores have been documented at certain sites, yet it is important to note that the utilisation of conventional Upper Palaeolithic volumetric cores has not been conclusively determined at any of the known sites. In assemblages from the interior of the Peninsula, where both discoid and Levallois components are also present, artefacts seem to be of slightly larger dimensions. At sites from both regions, a variety of tools are present, including Mousterian points, various sidescrapers (mostly lateral), raclettes, borers, and other types, including steeply retouched artefacts. In the Mousterian

⁴³ Delpiano et al. 2022.

⁴⁴ Karavanić & Banda 2023.

⁴⁵ Mihailović B. 2017.

⁴⁶ Sirakov 1983.

⁴⁷ Mihailović & Whallon 2017.

⁴⁸ Papaconstantinou 1989; Sitlivy et al. 2008; Dogandžić & Đuričić 2017.

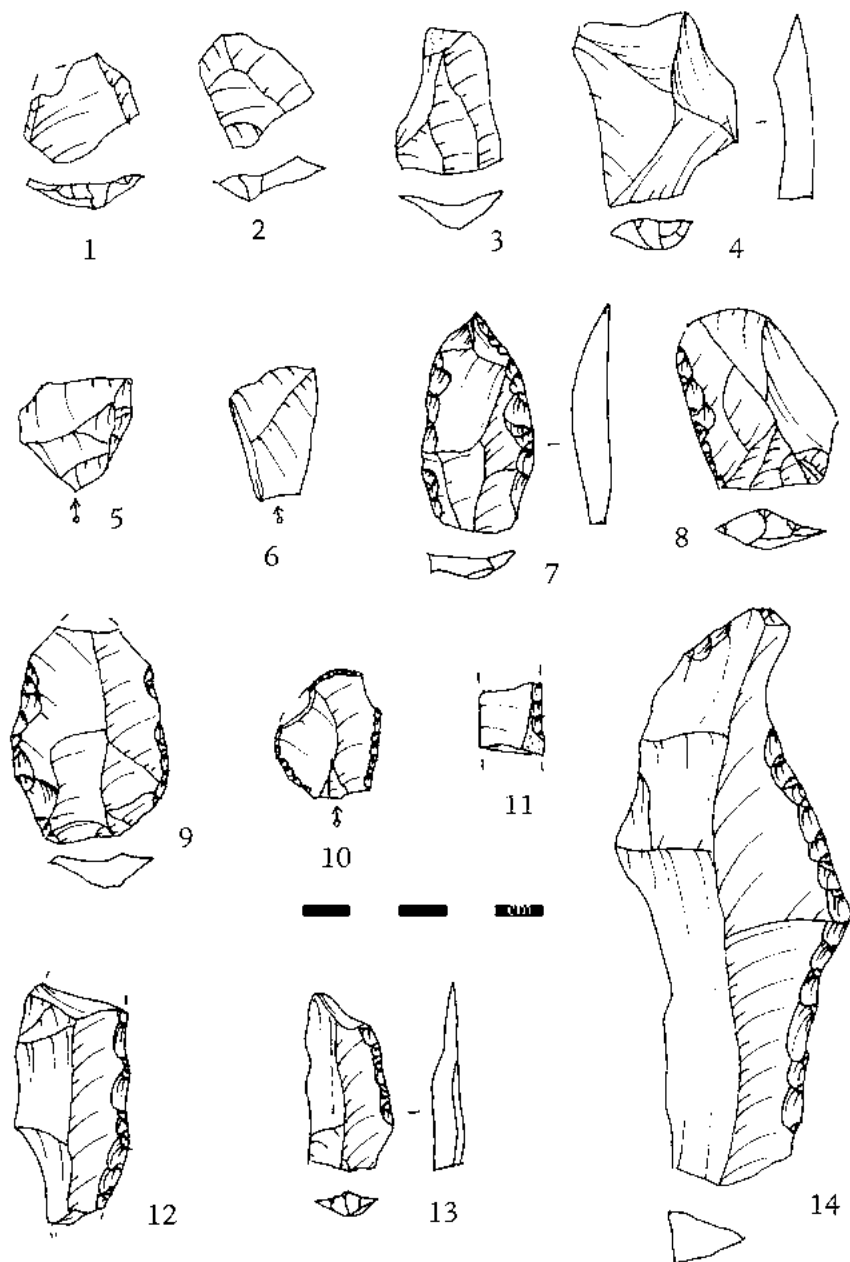


Figure 3. Levallois flakes (1–4), pseudo-Levallois flakes (5–6), Mousterian point (7), sidescrapers (8–9), raclette (10), backed tools (10–13) and retouched blade (14) from layer 6a of Šalitrena Cave.

context of Crvena Stijena (layer XII), a segment of the Uluzzian type has also been documented.⁴⁹

Sites dating from MIS 3 also encompass the Middle Palaeolithic industries with leaf points. However, only a minority of these sites have been dated, and even among those that have, leaf points have not been discovered in clearly defined contexts. In Vindija cave (Croatia), a leaf point was found in layer G1, the integrity of which is problematic,⁵⁰ while in the Samuilitsa II cave (Bulgaria), such artefacts are part of the inventory of “reconstructed” assemblages from earlier excavations.⁵¹ In Serbia, leaf points have been found in the Risovača cave,⁵² on the terrace in front of the Šalitrena cave,⁵³ and in Svileuva,⁵⁴ while in Bulgaria, Greece, and Albania, they have been also discovered at multiple open-air sites.⁵⁵

Discussion

In this short overview, we relied primarily on the results of artefact analyses from dated sites, while only briefly mentioning sites with uncertain chronologies. In the subsequent discussion, we will introduce an alternative perspective on the evolution of the Middle Palaeolithic technology of the Balkans, different from the conventional views. We will consider both the technological approach and the significance of placing events within well-defined spatial and temporal technocomplexes. We have opted for this approach because we believe that research traditions, entrenched perceptions, and terminological ambiguities impose numerous limitations in interpreting this complex issue and represent – alongside objective challenges such as limited research, lack of dates and analyses – some of the main obstacles to understanding the nature of Middle Palaeolithic technology.

As an illustration of these entrenched perceptions, we will mention the fact that Levallois industries have long ceased to be viewed as a separate culture, which is not the case with Quina industries. In Bordes’ and

⁴⁹ Михаиловић 2017.

⁵⁰ Zilhão 2009.

⁵¹ Sirakov, 1983.

⁵² Михаиловић & Зорбић 2017.

⁵³ Mihailović et al. 2014.

⁵⁴ Живановић 2022.

⁵⁵ Galanidou, Papoulia & Ligkovanlis 2016; Taneva 2021; Dogandžić 2023.

even in more recent interpretations (e. g., the “Quina World” ERC project, <https://quinaworld.univ-rennes.fr/> 20. II. 2025), Quina industries are treated as a cultural entity. We do not see a real reason to treat different knapping methods (Quina, Levallois, discoidal, etc.) differently when it comes to studying Middle Palaeolithic variability. All of these methods emerged during the Chibanian (Middle Pleistocene), and persisted until the end of the Middle Palaeolithic, albeit with differing levels of utilisation across various periods and geographical regions. The evidence from the Balkans provides the best illustration of this, simultaneously indicating the potential origins of technological variability in this European region.

Research conducted in the Velika Balanica cave suggests that the Quina method in Europe likely originated from the Near East, from where it spread towards the western parts of Eurasia during MIS 9–7.⁵⁶ When it comes to the emergence of Levallois technology, two or three scenarios are possible: a) the Levallois method first appeared in Western Europe (as early as MIS 9),⁵⁷ and then spread to the East with the so-called “Neanderthal expansion”;⁵⁸ b) it appeared simultaneously in different parts of Africa and Eurasia and reached the Balkans from the east,⁵⁹ and c) it emerged locally, perhaps even before the appearance of Quina technology in Velika Balanica – which could potentially be indicated by the presence of “proto-Levallois” artefacts at sites in the West Morava valley.⁶⁰ At present, the first option seems the most likely, although the other scenarios cannot be dismissed. The existing, somewhat limited evidence, along with uncertainties surrounding dating, currently preclude a conclusive answer to this question.

In any case, the final shaping of the Middle Palaeolithic technical behaviour occurred towards the end of the Chibanian Age, not only in the Balkans, but throughout the whole of Western Eurasia, and was marked by the predominant utilisation of the Levallois, Quina, and discoidal methods.⁶¹ Unlike Western Europe, all three methods were simultaneously used in the Balkans until the end of the Middle Palaeolithic,

⁵⁶ Mihailović et al. 2022a.

⁵⁷ Hérison et al. 2016.

⁵⁸ Kozłowski 2002.

⁵⁹ Adler et al. 2014.

⁶⁰ Mihailović, Milošević & Radović 2014.

⁶¹ Kuhn 2013.

with the Quina method being more prevalent in the early Middle Palaeolithic (up to MIS 5), and the discoidal method during MIS 3. Therefore, it is perhaps not surprising that all lithic assemblages of the “Charentian of South-eastern Europe” exhibit a Levallois component, and vice versa – MIS 5 Mousterian industries display a Charentian character.

We support T. Dogandžić’s observation that in the early Middle Palaeolithic in the Balkans the technological system centred on crafting tools from thick flakes, whereas in the late Middle Palaeolithic there was a shift towards the usage of disposable tools made from small flakes.⁶² Nevertheless, the reasons for this shift should be attributed more to behavioural factors rather than to a loss of technological knowledge during the cooling period in MIS 4. Recent research has indicated that a demographic crisis likely occurred in the interior of the Balkans at the peak of MIS 4, but it has also shown that Neanderthal populations persisted in the Adriatic–Ionian zone during this period.⁶³

Regarding the diversity of industries during MIS 3, it is noteworthy that at the onset of this period there is a slightly increased presence of transversal sidescrapers and other Quina elements at several sites in the coastal zone (e. g., Crvena Stijena, Klissoura).⁶⁴ However, we do not deem these instances significant enough to be ascribed to a distinct facies (Adriatic Charentian), or to be observable at inland sites, where Quina elements are only sporadically present. To verify the hypothesis of the Adriatic Charentian during MIS 4–3, it would be necessary to ascertain whether the Quina knapping method appears at sites in the Adriatic–Ionian zone.

The factors that may have influenced the distribution of bifacial tools in certain parts of Central and Eastern Europe are not fully elucidated. Nonetheless, the fact that the majority of sites are concentrated on the southern edge of the Pannonian basin and in the subalpine region (e. g., Vajo Salzone in the Italian Alps) strongly suggests that this type of industry extended further south than previously assumed.⁶⁵ In this context, their presence in Greece is likely due to population shifts and/or cultural transmission between the southern Pannonian/Lower Danube

⁶² Dogandžić 2023.

⁶³ Михайловић 2017; Mihailović, Mihailović & Whallon, in press.

⁶⁴ Sitlivy et al. 2008; Mihailović 2014.

⁶⁵ Peresani et al. 2022.

region and northern Greece during periods of cooling. Nevertheless, this hypothesis still needs to be tested.

Regarding the Micromousterian, it is clear that this facies represents a regional phenomenon that can be observed across a broader area of the northern Mediterranean.⁶⁶ However, we remain unconvinced that the distinct features of the Micromousterian can be solely attributed to the increased use of discoidal technology. Additionally, we doubt the feasibility of assigning undated sites – such as the open-air sites – to MIS 3 based solely on the quantities of artefacts produced. In many cases, discoidal technology arises as a consequence of intensive core exploitation, particularly in habitations that have been used for longer durations or more frequently. Therefore, it is perhaps not surprising that evidence of the Micromousterian is primarily confirmed at relatively rich and multi-layered coastal sites. It seems that the coastal areas were more densely populated than the inland regions during this period.

When it comes to the Middle–Upper Palaeolithic transition, it is important to highlight that recent research has revealed that certain technocomplexes – such as the Bachokirian and the Lincombian–Ranisian–Jerzmanowician (LJR) – once associated with Neanderthals, are now attributed to early modern humans.⁶⁷ Even if we set aside the uncertain evidence for the presence of modern humans in the western Mediterranean before around 50,000 years ago,⁶⁸ modern humans were likely present in the Balkans 47–43 ka cal. BP.⁶⁹ How the appearance of modern humans might have influenced the emergence of Upper Palaeolithic elements in the late Middle Palaeolithic of the Adriatic–Ionian zone and northern Balkans remains to be revealed. In any case, it is evident that the technological transition from the Middle to Upper Palaeolithic was not as sharp as previously believed, and the makers of Palaeolithic technocomplexes from this period cannot be identified solely based on lithic technology.

Conclusion

Rather than relying solely on individual sites or groups of sites, recent research has for the first time enabled a comprehensive examination of the

⁶⁶ Dogandžić 2023.

⁶⁷ Hublin et al. 2020; Mylopotamitaki et al. 2024.

⁶⁸ Slimak et al. 2022.

⁶⁹ Fewlass et al. 2020.

spatial and temporal variability of Middle Palaeolithic industries in the Balkans. Although there are differences in the approaches of various authors, there appears to be a high degree of agreement regarding the types of industries present in each period, and the main challenges in studying the evolution of Palaeolithic technology in this region.

If we consider only technological trends and traditions, it is clear that Levallois, Quina, and discoidal technologies – which emerged more or less concurrently at the majority of the examined sites – played the dominant roles in the Middle Palaeolithic of the Balkans. There are few exceptions to this pattern, with one notable example being the appearance of Quina assemblages without Levallois artefacts in the Balanica cave complex dating to approximately 300,000 years ago. The discoidal technology is also present from the outset, but gains significance only towards the end of the Middle Palaeolithic. For a complete understanding of the role of technology and technological changes, it is crucial to analyse materials from all investigated sites, especially from those where key evidence has been documented. It is also important to disregard sites lacking absolute dates or those where artefacts were collected from uncertain stratigraphic contexts, or where the context is missing altogether.

We believe that the variability of industries in the Middle Palaeolithic of the Balkans cannot be understood solely based on technological trends but also within the framework of studying spatially and temporally defined technocomplexes. This refers primarily to the Early Quina complex, which has only been confirmed at the Balanica cave complex, the so-called Charentian of South-eastern Europe, and early and late industries with bifacial tools in the peri-Pannonian region and the southern Balkans. It is crucial to determine which factors have influenced the strong continuity in knapping technology documented at multi-layered sites in the coastal zone – especially at locations such as Crvena Stijena and Klissoura – but it is also important to ascertain which manifestations occur and in which intervals across the entire territory of the Balkans, as well as those that are localised to specific parts of the peninsula. Only then will it be possible to connect occurrences recorded in the Balkans with those recorded in other parts of Europe and south-western Asia, thereby creating conditions for a comprehensive understanding of the factors that influenced the variability of industries across the entire region of Western Eurasia.

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Vesna Vučković*

Regional Museum of Paraćin
Paraćin, Serbia

The Late Neolithic settlement of Motel Slatina, Middle Morava Valley: life, conflict, and death

Abstract: Stone anthropomorphic figurines are a rare type of find in the Late Neolithic sites of the Vinča culture. One marble sample from the Late Neolithic settlement of Motel Slatina, in the Middle Morava Valley, has attracted our attention. It is similar to clay figurines, and we believe that this object reflected deep social meaning. To examine our point of view, we decided to assess the socio-economic background of the community of Motel Slatina. The research was conducted in two steps. The first step examined the character of the economy of Motel Slatina through socio-economic differences, based on a study of 601 macro-lithic objects from settlements of Motel Slatina and Turska česma–Slatina, as they formed a particular economic region within the Late Neolithic Vinča culture.¹ The second step involved the research of the association between stone artefacts, organised production with nine above-ground structures, and their context. The study resulted in new data on the social structure, cycle of social reproduction, inequality, and social conflicts among inhabitants of Motel Slatina.

Key words: macrolithic tools, economy, Late Neolithic, Middle Morava Valley, Central Balkans

Introduction

The settlements of Motel Slatina and Turska česma–Slatina provided important data on the Late Neolithic Middle Morava Valley in Central Serbia, and confirmed previous observations on a regional manifestation of the Vinča culture.² Settlements are 10 km apart and occupied 50 ha each on a plain–hilly area (Fig. 1 a, b). The lower horizon pro-

* vesna.p.vuckovic@gmail.com

¹ Vučković 2019, Vučković 2022; Vučković & Risch 2021; Vučković & Risch 2023.

² Garašanin 1979, Vučković 2019.

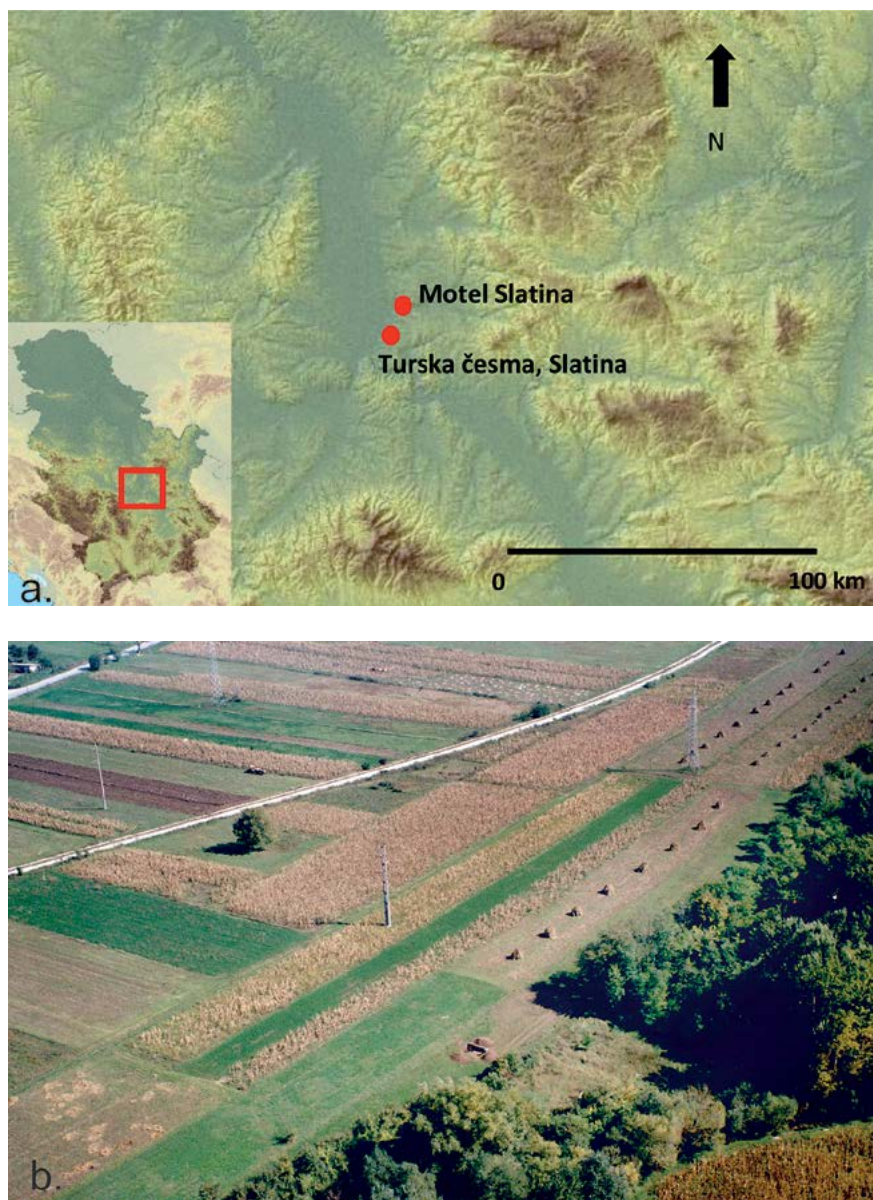


Fig. 1 a. Position of the sites of Motel Slatina and Turska česma–Slatina; b. The central part of Motel Slatina; Photo documentation Regional Museum of Paraćin; Documentation Regional Museum Paraćin.

duced semi-submerged dwellings. Younger horizons at Turska česma revealed above-ground dwellings and two-storey structures.³

The toponym *slatina* means salty soil and indicates favourable conditions for herding. The low economic importance of farming or the availability of a sufficient labour force for grinding was recognised through the low standardisation of geology for grinding tools, and the use of specific grinding technology.⁴ It enabled productivity, the production of surplus gain, and indicates a diet specifically supplemented by wild sources.⁵ Specialised and organised production was related mainly to working with stone, manufacturing ground edge tools, and processing subsistence goods. The processing of medium to hard materials was relatively low, and contrary to what can be expected according to the environmental context, bone processing and woodworking was not of significant importance. This suggests the possibility that the area around these settlements was already deforested, which can be examined by pollen analysis in the future. The economic production of these settlements reached a medium intensity, but the highest diversity in correlation to other parts of the territory of the Vinča culture.⁶ Autochthonous stone as raw material was exploited mainly, and its choice suggested territorial unity.⁷ The lack of certain rocks was compensated via exchange networks from neighbouring areas, while obsidian and objects of *Spondylus* and *Glycemeris* shells suggested long-distance exchange.⁸ Such a sustainable organisation of natural resources and means of production might explain the long duration of the Vinča culture in the area of the Middle Morava Valley. Evidence shows that this area resisted the Eneolithic Tiszapolgar culture and the Bubanj–Salcuța–Krivodol complex longer than other parts of the Central Balkans.⁹

Despite similarities, the economy and socio-economic organisation of these settlements displayed differences. This paper aims to present the socio-economic characteristics of the settlement of Motel Slatina. It will be reached in two levels. The first level is a comparison of the economic

³ Перић 2004; Perić 2017.

⁴ Vučković 2019, chapter 6.1; Vučković 2022.

⁵ Cvetković 2004; Delgado-Raack, Gómez-Gras & Risch 2009; Vučković 2019, table 7.2.

⁶ Vučković 2019, Table 8.1.

⁷ Vučković 2021; Vučković & Risch 2023.

⁸ Vučković 2021; Bajčev & Stojanović 2016; Tripković & Milić 2016.

⁹ Гарашанин 1973, 102; Garašanin 1979, 189; Perić 2006.

processes and organisation of Motel Slatina and Turska česma–Slatina. A second level is addressed to explore household inequality/equality via spatial and contextual distribution of the studied tools from Motel Slatina.

Motel Slatina, excavations and chronology

Motel Slatina was first registered in 1961.¹⁰ Excavations were carried out during the 1960s, in 1985–1986, during the 1990s, and at the beginning of this century. In total, an area of ca. 900 m² has been explored. The cultural layers belong to the Roman period, the Early Iron Age, and the Late and Early Neolithic (5400/5300–4650/4600 cal. BC; ca. 6100).¹¹ Research showed that the depth of the cultural layers varies between ca. 6 m and nine horizons, with all development phases of the Vinča culture (according to Garašanin)¹² in the southern part, and 1.80 m in the northern part of the settlement.¹³ Radiocarbon results date the youngest horizon in the time interval between 4990 and 4790 cal. BC.¹⁴

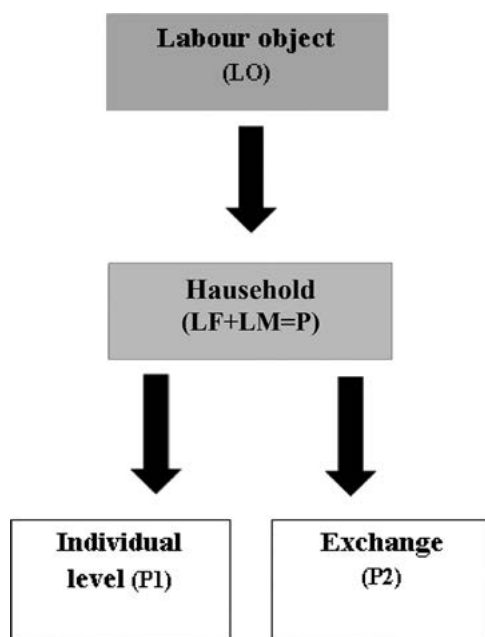


Fig. 2. Economic structure of the Neolithic in the Central Balkans (LF: labour force, LM: labour mean; P: product).

¹⁰ Vetnić 1974, 139.

¹¹ Vetnić 1974; Madas 1988.

¹² Garašanin 1979.

¹³ Vetnić 1974; Srndaković 1994; Madas 1988; Петрић 2004.

¹⁴ Vučković & Risch 2023.

Materials and method

The focus is on 601 macrolithic artefacts from both settlements (Motel Slatina, $N=187$; Turska česma–Slatina, $N=414$), divided into 13 functional groups (Fig. 3 a–c) and seven buildings, including pits from Motel Slatina. Unfortunately, most of the buildings were explored incompletely. Unlike Turska česma, where the tools were gathered systematically, the analysis included the partially collected artefacts found during 1985–1986 and 2001–2002 at Motel Slatina, due to the recording strategy.

Our approach includes the theoretical backgrounds of the analysis of petrography, morphometry, and the functional analysis of macrolithic artefacts.¹⁵ It focuses on labour objects as an aim of the production process, and can be observed through the main economic variables: labour means, household, production, distribution, and exchange. This process started with the household as the basic unit of social organisation and economy, and was involved in the production and implementation of technology (LF + LM). The final product is consumed at two levels. The first is an individual level (P1). The second level is the product (P2) used in an exchange (Fig. 2). The final product can be considered as an object with social value, which is determined by two factors. The first factor is the production value, based on the accessibility of natural resources, and the implementation of production and distribution. It includes the workforce, with physical limits and technological development. The second factor is the use value. This social aspect is based on properties and quality, and has also been shaped by transport means, distance, and social and political factors.¹⁶ To estimate the economic power of the household, we included contextual features, such as the size of the objects, hearths and ovens, and access to tools made of non-local stone.¹⁷ The analysis of pottery has never been conducted, and so it was excluded from these observations.

¹⁵ Risch 1995; Risch 2002; Risch 2008; Risch 2011; Risch 2018; Adams et al. 2009; Delgado-Raack 2008; Delgado-Raack, Gómez-Gras & R. Risch 2009; Delgado-Raack & Risch 2009; Delgado-Raack & Risch 2016.

¹⁶ Tringham & Krstić 1990, 602–615; Risch 2011, 101–102.

¹⁷ Porčić 2011; Трипковић 2013; Wright 2014.

The economy and macrolithic tools in Motel Slatina and Turska česma–Slatina

The study of macrolithic tools from the Late Neolithic sites of Motel Slatina and Turska česma–Slatina suggests similar activities and an organised production, which appear in different proportions (Fig. 4–6). Their economy was based mainly on the use of abrasive tools.¹⁸ They appeared more often at Turska česma–Slatina (ca. 46%) than at Motel Slatina, where they represent ca. 31% of all study artefacts. The analysis suggests that the use of abraders was organised in several technological processes at both settlements. At Turska česma–Slatina, 36% of active surfaces were implemented in shaping, polishing, or sharpening stone tools (pattern 1). The role in the economy of abraders from Turska česma–Slatina that was involved in the processing of certain plants and wood. At the settlement of Motel Slatina, they had a larger importance (56%), with 55% of the working surfaces of bone being involved in the same activity.¹⁹

Approximately 2% of all studied abraders were used to crush, pound, or pulverise small, soft organic materials on hard and concave surfaces at both settlements (pattern 3) (*idem*).

The use of ground edge tools was more intensive at Motel Slatina than at Turska česma–Slatina (Fig. 5). Organised use of adzes in cutting processed materials (pattern 2) has been detected, with 5.5% of all adzes used in crafted production at each of the sites. The appearance of flakes knocked off ground edge tools, semi-finished products, and reshaped ground edge tools at Motel Slatina, is slightly stressed in relation to Turska česma–Slatina. The proportion of raw materials, semi-finished products and anvils, which suggest manufacturing the rest of the macrolithic tools and chipped stone tools, is more or less similar in both settlements. The perforated ground edge tools were detected only at Motel Slatina (Fig. 6).²⁰

Percussion tools present about 8% of all studied artefacts at each of the studied sites in the Middle Morava Valley. These artefacts were in-

¹⁸ Abrasive slabs and abraders.

¹⁹ The results of the analysis have been presented at “The Neolithic tools with abrasive wear traces” – International conference AWRANA, Beyond use-wear traces: Tools and people held between 29th May–1st June 2018 at the University of Nice Côte d’Azur – Saint Jean d’Angely Campus (Nice, France). Vučković & Risch 2021.

²⁰ Vučković 2019.

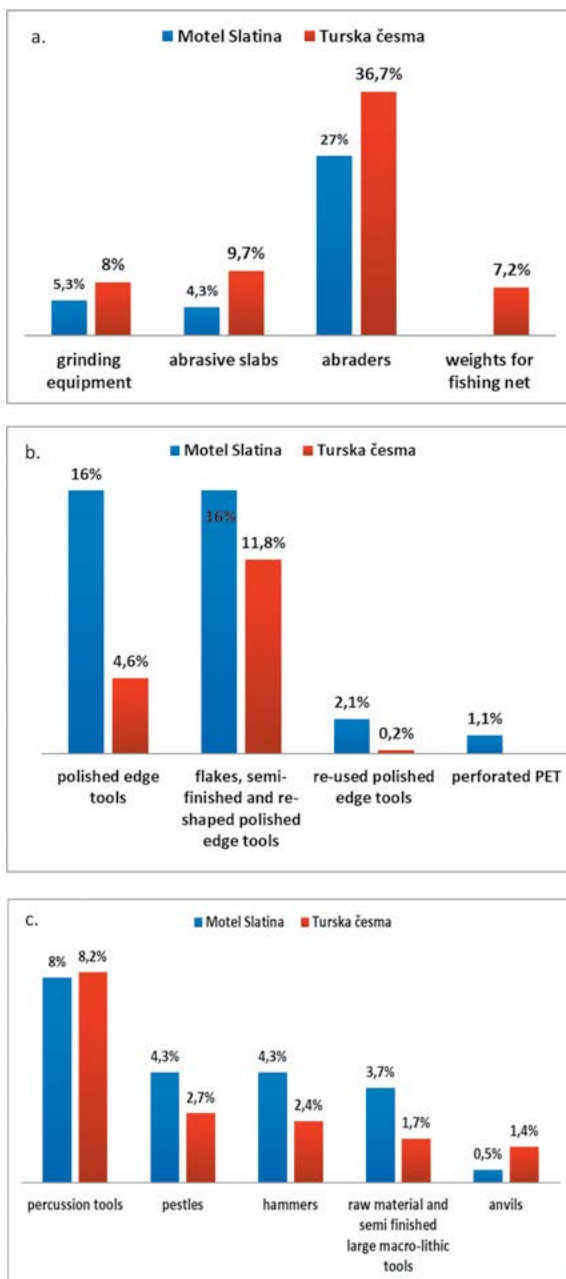


Fig. 3. a–c. Economy of the Late Neolithic: types of artefacts from settlements of Motel Slatina and Turska česma; Motel Slatina, N=187, Turska česma, Slatina N= 414

volved in different organised activities. Crafters used quartzite objects (patterns 1–4) to perform various activities.²¹ The record shows that the use of these artefacts was more intensive at Turska česma, with 36.1% of all studied percussion tools, in contrast to Motel Slatina, where it has been observed based on 8.3% of all studied percussion tools (Fig. 6). The implementation of the artefacts with the six working surfaces (pattern 6) was more intensive at Motel Slatina than at Turska česma.

Observations in both settlements also indicate a specific use of the artefacts with three active sides (pattern 5), and artefacts involved in splitting and crushing stone, or the maintenance of the active surfaces of the abrasive tools (pattern 1A). Processing medium to hard materials, such as bone or wood, by splitting and crushing (pattern 3A) has been documented only at Motel Slatina (Table 1).²²

Records also show that 45.4% of all pestles, which were involved in organised work in the Central Balkans, were detected in Turska česma–Slatina while only 9% come from Motel Slatina. The proportion of this type of tool in Turska česma–Slatina is similar to that noted from the settlement of Potporanj, in the northern part of the Vinča culture.²³

The rest of the tools, such as grinding equipment, reused ground edge tools, and hammers, appeared in more or less similar proportions in the settlements (Fig. 3 a–c).

Pattern	Motel Slatina (n)	Turska česma, Slatina (n)
1-4	3	13
5	3	3
6	7	2
1A	3	2
3A	1	-
In total	12	25

Table 1. Distribution of patterns of percussion tools during the Late Neolithic in the Middle Morava Valley. N= 37.

²¹ Vučković 2019.

²² *Ibid.* subchapter 6.4.1, fig. 6.4.16/1.

²³ *Ibid.*

Distribution and function of the macrolithic artefacts and their association with structures

A geomagnetic survey of a small area did not allow for recognition of a plan and organisation of the settlement of Motel Slatina.²⁴ Excavations revealed above-ground buildings in younger, Late Neolithic strata, and semi-submerged dwellings in the oldest Late Neolithic horizons.²⁵

Below, we focus on a distribution of the macrolithic artefacts from nine structures or associated layers detected during excavations in 1985–1986 and 2001–2002. The analysis included 36 various macrolithic tools, or 19.2 % of the studied collection. The abraders are dominant, while percussion tools and objects with traces of secondary modification are numerous (Table 2).

Tool type	N	%
grinding slab	2	8,9
abrader	12	35,3
celt	2	5,9
adze	1	2,9
re-used ground edge tools	2	5,9
hammer	1	2,9
percussive tools	3	8,9
pestle	1	2,9
figurine	1	2,9
mace	1	2,9
tools with traces of secondary modification	2	5,9
unknown product	1	2,9
raw material	4	11,8
Total	35	100

Table 2. Stone objects detected in above-ground buildings in Motel Slatina. N = 35.

²⁴ Perić et al. 2016.

²⁵ Періх 2004.



Fig. 4. Trench 3–4, object 5, excavation 1985, Motel Slatina; Photo documentation Regional Museum of Paraćin.

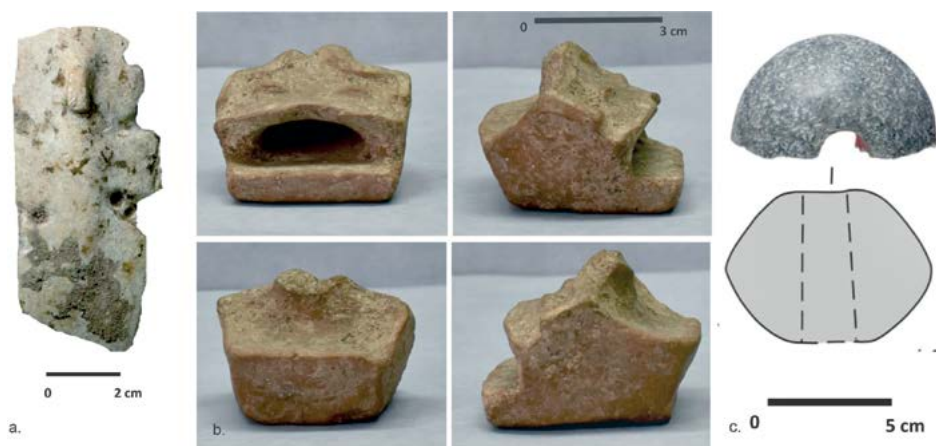


Fig. 5 a. Marble figurine, L – MS – 18, Motel Slatina; b. model of a clay oven MI292, from House O-5, trench III–IV, Motel Slatina, excavations 1985; c. mace L – MS – 39, trench XI, Motel Slatina.

A structure with stone foundations in trench III revealed a meta-siltstone tool with traces of secondary modifications (L – MS – 71) and an abundance of fragmented pottery.

An above-ground building, O-5, with a stone foundation (Fig. 4), was discovered in trench III–IV. It is assumed that this house, measuring 20 by 8 m, consisted of two residential units, with a total internal surface of 100 m². Beneath a 10 cm thick floor made of a mud coating was a surface of broken stones, and among them grindstones, which were used as a secondary substructure of the house. This house produced a part of a foundation of a calotte-oven, made of a 2 cm burnt clay layer, pottery, a large pot in a vertical position, animal bones, one deer antler, burnt daub, and a fragmented marble, anthropomorphic figurine (L – MS – 18) (Fig. 5a). The head displays a plastic nose. The thin body is flat on the obverse, and it is convex on the reverse side. The right part of the body was removed by sawing, and the bottom is missing. The left hand is perforated. Sex/gender is not recognisable. The surface of the figurine was polished. The described details make this object similar to the clay samples. It can be said that we are dealing with a masterpiece of a skilled craftsman. J. Chapman mentioned another marble anthropomorphic figurine from the settlement at Turska česma.²⁶ The rest of the Late Neolithic anthropomorphic figurines from the Central Balkans are made of marble. Unlike our sample, they are represented by a schematic body, or by mushroom-like heads placed on a pedestal.²⁷

House O-5 also produced pottery,²⁸ animal bones, a fragmented schist percussive tool (L – MS – 40), three fragmented fine-grained abraders (L – MS – 10, L – MS – 11, and L – MS – 14), of which the first two have grooved working surfaces and a meta-siltstone celt (L – MS – 55), with a working edge additionally narrowed by flaking, with flake negatives being produced by its use. The analysis of these objects indicated that they were used for the processing of objects made of wood or bone.²⁹ A clay model of an oven MI1292 (Fig. 5b) was uncovered below the substructure of the object, which might be a consequence of depositional processes.

²⁶ Chapman 1981, 120.

²⁷ Antonović 2003, 65, Fig. 44/7–10.

²⁸ Pottery has not been analysed and it is stored in the Regional Museum in Paraćin.

²⁹ Живанић 2010.

Structure, trench	Non-local rock type	Rare artefacts	Rest of findings	Activities
Structure, trench III	meta-siltstone		pottery, tool with traces of secondary modifications	work on stone
House O-5, trench III–IV	marble meta-siltstone	figurine model of clay oven	animal bones, deer antler, large pot, calotte oven , fine-grained abraders, celt, percussive tools	work on bones carpentry
House O-4 and surrounding area with pit, trench IV	diorite		large vessels, pestle, coarse-grained abrader, object of unknown use	grinding, work on bones carpentry
Structure in trench XI	meta-siltstone	mace	pottery, animal bones, large vessel, reused ground edge tools, adze, raw stone material, percussive tools	work on bones carpentry work on stone
ZIPP I			pottery, chipped stone, bone tools, coarse-grained abraders, grinding slabs, hammer, amphibolite raw material for large tools with abrasive surfaces	work on stone grinding
ZIPP II and surrounding area with pit	meta-siltstone		pottery, fine-grained abraders, protom of zoomorphic altar, animal bones, flakes of chipped stone, celt, abrasive slab	work on bones carpentry
ZIPP III			hearths, pottery, clay weight, gabbro-diorite as raw material for a tool with an abrasive surface, coarse-grained abrader	work on stone textile

Table 3. Review of access to rare raw materials, rare stone artefacts, context, and activities in the houses in Motel Slatina.

Trench IV yielded structure O-4, with a stone foundation. This context included large vessels and a fragmented diorite pestle (L – MS – 48), with two levelled and faceted working surfaces on the top and bottom sides. Objects found in square D of the same trench included a coarse-grained sandstone abrader (L – MS – 6), and a sandstone, a perforated object of unknown use (L – MS – 64).

The oldest construction horizon in trench XI revealed a feature partly destroyed by fire, and a concentration of finds within it (Fig. 6). This concentration consisted of pottery fragments, animal bones, and a large vessel, remaining *in situ*. The central part of the trench produced burnt daub, stones, a meta-siltstone adze (L – MS – 1) with no use traces on the working edge, two reused ground edge tools (L – MS – 33, and L – MS – 35), a fragmented gabbro mace (L – MS – 39) (Fig. 5c), a hammer (HAM, L – MS – 26), and a piece of sandstone, identified as raw material. The same trench revealed pit 9 with two fragmented, quartzite percussive tools (L – MS – 44, and L – MS – 45) with dents and pits on the working active sides.

Trench ZIPP I, in the northern part of the settlement, revealed a cultural layer 1.80 m thick, formed by two structural horizons. The older horizon produced burnt daub fragments and remains of an above-ground dwelling with wattle imprints, and a hearth. The remains of an above-ground dwelling with a hearth belong to the younger horizon. This horizon also produced large fragments of burnt daub with impressions of wooden elements. They were detected at 0.40–0.60 m of relative depth, and concentrated along the southern profile.³⁰ Both horizons included abundant fragmented pottery, chipped stone, bone tools, and macrolithic tools, such as sandstone and amphibolite coarse-grained abraders and abrasive slabs (L – MS – 113, L – MS – 112, L – MS – 103), two amphibolite grinding slabs (L – MS – 156 and L – MS – 89), a sandstone hammer (L – MS – 147), and amphibolite raw material (L – MS – 169), used to manufacture an abrasive slab or a grinding slab.

The younger stratum of trench ZIPP II yielded a concentration of natural stones, fragmented pottery, burnt daub, three meta-siltstone fine-grained abraders (L – MS – 127, L – MS – 128, and L – MS – 130), and a meta-siltstone tool with traces of secondary modifications (L – MS –

³⁰ Перић 2004, 264.

170), at a relative depth of 0.60 m.³¹ This layer also presented a pit in the western part of the trench. It included ash, lampblack, the protom of a zoomorphic altar, animal bones, flakes of chipped stone, a meta-siltstone celt (L – MS – 166) with flake negatives on the working edge, and a coarse-grained amphibolite abrasive slab (L – MS – 157).

Trench ZIPP III produced an above-ground structure with hearths corresponding to the younger horizons already identified in trenches ZIPP I and II,³² and revealed fragmented pottery, two well-preserved vessels, a clay weight, a coarse-grained sandstone abradar (L – MS – 111), and gabbro-diorite as raw material for a tool with an abrasive surface (L – MS – 152).

Conclusion

The economy of Motel Slatina was characterised by carpentry, bone processing, stone tool production (Fig. 4–6), and the specialised use of adzes and percussion tools (pattern 3A) in processing medium to hard materials such as bone or wood (Table 1). The same activities, but on a level of household production, were recognised in the analysed above-ground houses (Table 2). Work on stone was stressed in trench XI in the southern part of the settlement, suggesting the presence of a workshop. The diorite pestle and amphibolite grinding slabs in the trench indicated food production in House O-4 and ZIPP I. Diorite is a hard rock, and thus grinding in House O-4 was considered as a long-term activity. At the same time, amphibolite showed low production efficiency,³³ suggesting that the inhabitants of this household in trench ZIPP I could not afford good quality raw material. Although, access to non-local raw material was identified almost among all studied buildings (Table 3). Meta-siltstone was used for the ground edge tools, and these objects displayed signs of reuse or traces of secondary modifications, indicating a non-reliable source of this rock. Furthermore, the economy of Motel Slatina was more dependent on rock supplies from the surroundings than Turska česma.³⁴ This means that the inhabitants of Motel Slatina invested more

³¹ Пєрпїћ 2004.

³² *Ibid.* 265.

³³ Vučković 2022.

³⁴ Vučković 2021; Vučković & Risch 2023.

time in organising raw material supplies, and had stronger connections with distant areas, which allowed a greater flow of information.

The analysis also revealed three phases of social reproduction in House O-5, based on the building elements, the size of the structure, and inventory – such as an oven, a marble figurine, and a clay model of an oven. The initial phase of social reproduction was marked by broken grinding slabs in the substructure of a house. It was suggested that the building might have been built by newcomers, while the size of the house and the number of the rooms suggested an increasing number of members of the household, in a co-operation or an economic and social crisis.³⁵ The size also suggested that it belonged to large houses, typical for this part of the Vinča culture, south of the Danube and Sava rivers. These objects usually contained finds with status meaning, such as copper objects, probably as part of a local exchange network.³⁶ The social position of House O-5, and surplus production, can be recognised based on the calotte oven, as inventory of a superior room with a central position in the life of the inhabitants,³⁷ and the marble anthropomorphic figurine. Ethnographic research suggested that the oven served the purpose of separating the economic activity of a room from the residential part. It also included a wood ceiling installation, all of which increased the temperature during long winters. An open hearth did not disappear, regardless of the higher consumption of wood for heating, as it was more convenient for food preparation, making milk products, drying of meat and cloths, lighting etc.³⁸

Marble as a non-local raw material revealed that the household was involved in exchange networks with distant communities,³⁹ while effort invested in procurement and manufacturing underlies the social meaning and the value of this stone, and a possible hierarchy among households in the settlement. A previous study suggested a symbolic relationship between the anthropomorphic figurines and the oven,⁴⁰ while the clay mod-

³⁵ Tringham 1992; Tripković 2009, Трипковић 2013.

³⁶ Porčić 2012, table 2; Трипковић 2013.

³⁷ Tripković 2009, Трипковић 2013, Tripković 2015.

³⁸ Вукосављевић 1965, 160–162.

³⁹ Vučković & Risch 2023.

⁴⁰ Crnobrajina 2011.

el of an oven, which was identified as a deity of fire,⁴¹ could be the third element of this set dedicated to an unknown cult.

The intentional breakage of the marble figurine identified the final phase of life in House O-5. The breakage revealed an act against the transmission of the object to descendants and people associated with the house, and the abandonment of the settlement or the relinquishment of ownership.⁴²

The gabbro mace from trench XI, a rare type of find, could also testify to a hierarchic position of the household, or it might represent a message of social tensions, violence, and defence, and might explain burnt houses.⁴³ The maces appeared later than the Vinča enclosed settlements, ca. 5200–5000 cal. BC.⁴⁴ The number of maces increased from 5000/4950–4850 cal. BC, when intergroup conflicts and the number of enclosed settlements were intensified.⁴⁵ A geomagnetic survey of a small area of settlement at Motel Slatina did not allow for the identification of a defensive structure, but it seems that its inhabitants were involved in the conflict. It also appears that some settlers left their homes because of social tensions before the incident, and that their homes did not collapse in a fire.

Finally, we can conclude that this study contributed to examining the economy, production, and social processes such as reproduction, inequality, and hierarchy in the Late Neolithic society of the Vinča culture. We also believe that this methodology can assist in identifying an organisation of prehistoric settlements, the differentiation of a residential part of the settlement with home craft production, and a zone with specialised and organised production.

Acknowledgements

We would like to thank Ian Cipin for editing this text.

⁴¹ Petrović & Spasić 2013.

⁴² Cf. Wright 2014; Tringham 1992.

⁴³ Wright 2014; Borić et al. 2018.

⁴⁴ Antonović 2003.

⁴⁵ Antonović 2003; Borić et al. 2018.

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Miloš Spasić*

Belgrade City Museum
Belgrade, Serbia

Belgrade Before Singidunum: Prehistory of the Belgrade Fortress

Abstract: The location of the Belgrade fortress is one of the most recognisable *topoi* in the Serbian capital. Lying on a prominent hill rising high above the confluence of the Sava and Danube rivers, this place was inhabited for millennia before it became a significant Roman fort. Prehistoric layers of the site were uncovered from the very beginning of the earliest archaeological excavations, but were only scarcely published up until now. Significant parts of the Late Neolithic and Late Copper Age settlements were uncovered, while a modest collection of Late Bronze Age and Iron Age pottery signals the occupation from these periods as well. The paper presents results of the excavations of the prehistoric horizons that were investigated in the course of the last eight decades.

Keywords: Belgrade fortress, Neolithic, Copper Age, Vinča culture, Kostolac culture

Personal Introduction

Nikola Tasić was one of the most prominent figures of Yugoslav and Serbian archaeology from the second half of the twentieth century. I have had the exquisite honour and enormous joy to collaborate with him during the work on my BA and MA theses, which were completed on Neolithic and Eneolithic material from his excavations carried out at the sites of Vinča–Belo Brdo and Gradina na Bosutu.¹ Nikola generously shared his vast knowledge on Balkan prehistory with me on numerous meetings in his Academy office. He was far too modest for someone of his academic reputation, encouraging me to persist and continue with my

* milos.spasic@mgb.org.com

¹ Spasić 2009; Spasić 2011; Spasić 2015; Тасић 1984; Тасић 2001.

research. As soon as I finished a chapter, or at the conclusion of the research, he was asking the same question: "OK, that was fine! What are we doing next?!" I have seized the opportunity of working with him tremendously. After my appointment to the Belgrade City Museum, an institution he was also part of as curator of the Zemun Municipal Museum, I have continued working on analyses of the results of his excavations at Late Copper Age settlements in Dobanovci, the Copper Age settlement in Belegiš, the Iron Age settlements at Jakovo–Ekonomija Sava, and others. N. Tasić was one of the excavators of prehistoric layers of the Belgrade fortress during the late 1960s and the early 1970s, as well. Being a multilayered prehistoric site with an almost uninterrupted sequence of five thousand years of prehistoric occupation, evaluation of the excavation results from this mythical place offers a good opportunity for honouring N. Tasić's heritage and vast knowledge, and the impact he has had on prehistoric archaeology in the former Yugoslavia, Serbia, and beyond.

Introduction

Archaeological excavations of the Belgrade fortress began during World War Two under the leadership of W. Unverzagt – a proponent of the Ahnenerbe organisation, founded by H. Himmler to promote and investigate ancient German history.² Setting aside the ideological discourse of this truly sad episode in the history of European archaeology, it was the first to bring to light the existence of prehistoric settlements on the spot of the Belgrade fortress.³ In the post-WWII period, the fortress has been excavated almost every year. It became a focal point for understanding the development of Roman and Mediaeval periods in Belgrade. Excavations were conducted by the Belgrade City Museum, the Institute for the protection of monuments – Belgrade, and the Archaeological Institute – Belgrade. Fortification systems were thoroughly investigated and studied in the course of restoration and conservation processes.⁴ Prehistoric layers were uncovered during almost every excavation campaign, usually in a very poor condition, being severely damaged and destroyed during building activities that modified the plateau above the confluence in Ro-

² Cf. Bandović 2014; Bandović 2019.

³ Unverzagt 1958.

⁴ Cf. Поповић 2006.

man, Mediaeval, Ottoman, and Habsburg times. Although it is an important multilayered site for understanding the prehistoric dynamics in the Belgrade area, only few prehistoric objects were published until now – namely, several prehistoric sherds from the earliest excavations,⁵ a selection of Vinča culture pottery from a dug-out structure in the Upper town,⁶ a selection of Neolithic pottery and Neolithic and Copper Age stone tools from the Upper town,⁷ a Vinča culture clay vessel with a stylised bull protoma on the handle,⁸ and a stray find of a rare type of Neolithic stone figurine.⁹

There are two prominent layers of prehistoric occupation that left solid traces of both housing structures and abundant material culture: mainly pottery, worked stone, and bone and antler artefacts. The first settlement belongs to Late Neolithic times (c. 4900–4600 BC), when this place was inhabited by a Vinča culture community. More than a millennium and a half later (c. 3000 BC), a Kostolac culture settlement was founded during the Late Copper Age. All later prehistoric layers were only scarcely investigated. Statistical quantification of 1568 diagnostic pottery sherds from the Prehistoric collection of the Belgrade City Museum shows that 1.3% of the fragments could be dated to the Late Bronze Age, while a somewhat larger share can be attributed to the Early Iron Age (4.4%). Surprisingly, only four vessel fragments could be securely dated to the Late Iron Age, although some authors supported the thesis that the name of the later Roman town, Singidunum, owes its name to the Celtic tribe Scordisci, who allegedly occupied this place several centuries prior to Roman times.¹⁰ On the other hand, the Late Neolithic pottery assemblage represents 73%, and the Late Copper Age makes about 13% of the total number of diagnostic sherds kept in the Belgrade City Museum. The remaining 8.3% of the prehistoric corpus encompasses non-datable sherds.

⁵ Unverzagt 1958.

⁶ Бикић & Иванишевић 1996, 256, 257, сл. 20.

⁷ Spasić 2019.

⁸ Spasić 2012, 303, fig. 14.

⁹ Петровић, Катић & Спасић 2009, 114, кат. 130; Tasić 1973, T. XLIX/188.

¹⁰ J. Todorović, one of the excavators of the Belgrade fortress, withdrew from such a hypothesis quite early, aware of the lack of Late Iron Age material from the site (cf. Todorović 1968, 23; Todorović 1972, 9). B. Gavella excludes the Belgrade fortress as a possible place for a Late Iron Age oppidum also (Гавела 1955).

Two most prominent prehistoric layers from the place of the Belgrade fortress – Late Neolithic and Late Copper Age settlements – will be analysed in the following chapters. Although very limited, available data on settlement structures and material culture distribution will be discussed in terms of building a comprehensive picture of the evolution of built environments, and a stratigraphic picture of this place in later prehistory. Excavation and recording strategies employed during the investigations of prehistoric layers differed from campaign to campaign, with most abundant information and valuable documentation created and left by J. Todorović and N. Tasić, during their supervisions of excavations of prehistoric layers in 1961, 1963, 1968, and 1970.¹¹ A few notes regarding the quality of field documentation from 1961–1973 kept in the Documentation Centre of the Belgrade City Museum should be stressed in the beginning. There is not a single excavation campaign from this period with a complete documentation archive. For some campaigns, excavation diaries are missing, some lack technical documentation (i. e. photos, ground and profile plans), others lack inventory, find listings and drawings, and so on. Diary entries are usually very poor, missing basic information regarding the uncovered prehistoric layers, structures, and finds. Sometimes the sole account on the existing prehistoric structure can be found only on the label kept with the material. At other instances, one lapidary sentence in a field diary describes a structure which cannot be traced in any other record. In such a situation, although we have an account of an excavated “eneolithic house, neolithic hut”, there is not enough data on its appearance, dimensions, its inventory, and stratigraphical position. Terminological inconsistency blurs the records as well. In one campaign, a Vinča culture pit is labelled as “eneolithic house”, and a similar feature from a later campaign is sometimes referred to as a “prehistoric hut”.¹² Thus, the paper will focus only on the structures that have more or less complete documentation and surviving material, which is today kept as a part of the Prehistoric collection of the Belgrade City Museum.

¹¹ Cf. Birtašević 1970, 166–167; Tasić 1968; Todorović 1961; Todorović 1963.

¹² Terminological ambiguity with assigning the Vinča culture either to the Neolithic or the Eneolithic period was at its peak during the 1960s and 1970s. In regards to the Kalemegdan finds, such labels bring confusion in the evaluation and interpretation of finds and structures, having in mind that there are both Neolithic (Vinča culture) and Eneolithic (Kostolac culture) layers.

Late Neolithic Settlement

The physical appearance of the so-called Kalemegdan plateau above the Sava–Danube confluence was significantly different than it stands today. Modern-day physiognomy of the site owes its form to the vast building activities and large-scale modifications of the original terrain carried out during historic periods, particularly in mediaeval and early modern times.¹³ M. Popović, an eminent researcher of the Belgrade fortress, signals that, prior to the Roman period, the plateau on the hill was surrounded by two rivers on three sides, with slopes and cliffs which descend steeply towards the Danube and the Sava. The site could thus only be accessed from the south-eastern side.¹⁴ A Vinča culture settlement was founded on the geological layers comprised of dark and black soil, that were formed over the so-called virgin layers of yellow, clayish earth, and the famously rocky surface of the Kalemegdan terrace. Neolithic occupation is confirmed on several locations in the so-called Upper town of the fortress, which is the most dominant part of the hill.

J. Todorović mentions that the Neolithic – Vinča culture – village at the site of the Belgrade fortress consisted of above-ground houses, built in the wattle and daub technique from the later phase, and dug-out houses from the supposed earlier phase.¹⁵ Both documentation and material kept in the Belgrade City Museum signal that there was only one Vinča culture layer at the Belgrade fortress, with the remains of above-ground houses solely. The majority of pits interpreted as dug-out houses were in fact larger refuse pits that were previously most probably used as structures for extracting clay.¹⁶ The pottery assemblage, characteristic of the later Vinča culture (Vinča D), speaks in favour of a single-phase occupation. Above-ground houses of unknown size and orientation have been detected on several locations in the Belgrade fortress. During the 1963

¹³ Cf. Поповић 2006.

¹⁴ *Ibid.* 27.

¹⁵ Todorović 1963, 74. J. Todorović promoted such dug-outs to above-ground houses as a linear evolution, starting with his excavations at Banjica (Тодоровић & Цермановић 1961), and kept a similar narrative in his later interpretation of other sites also. Such a hypothesis, that almost every Vinča culture settlement comprises earlier dug-outs and later houses, was recently thoroughly debated (cf. Спасић, Живановић & Стојић 2017, 43–47).

¹⁶ For the full discussion on the dug-out houses in the culture settlements, cf. Спасић, Живановић & Стојић 2017, 43–47; Трипковић 2013, 21–55.

campaign, remains of an above-ground house were revealed in the four by three meter trench B₁ in the Upper town.¹⁷ Only part of the house was located in trench B₁, while its remains were not present in the B₂ trench, located one meter to the south. The minimum length or width of this house is four meters, since its remains are visible throughout trench B₁, and continue both to the south and to the north. The diary from this campaign is missing, so other information concerning the appearance of this house, and the presence of thermal structures and other house inventory, could be only speculated upon. Drawings of the cross-sections and plan of the level of the house floor do not indicate the presence of any structure or material (Fig. 1). Judging by the cross-sections, the accumulation of the collapsed wall fragments that were present on the floor of the house is somewhere around 0.4 meters. Not a single pottery sherd from the collection carries a label which denotes that it originates from this context (i. e. the house floor). Several fragments of vessels – a shallow baking pan, a bowl with a globular body and conical neck, a biconical bowl with a rounded shoulder and a conical neck – originate from the level of the house in trench B₁.

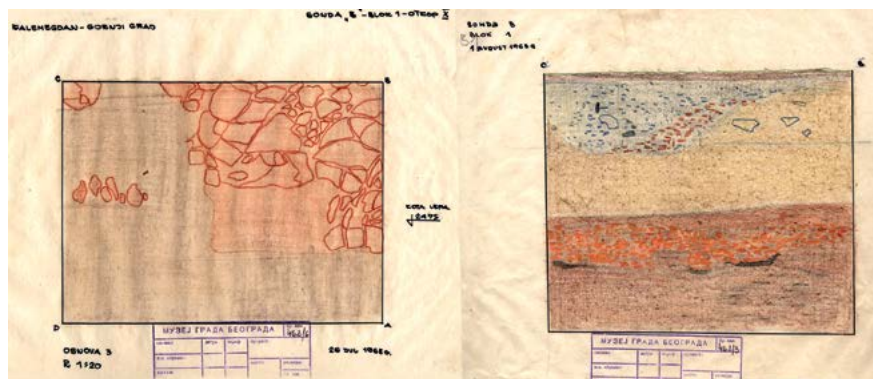


Figure 1. Ground plan and profile of the Vinča culture above-ground house, excavated during the 1963 investigations in the Upper Town, Belgrade City Museum.

¹⁷ Todorović 1963, 74.

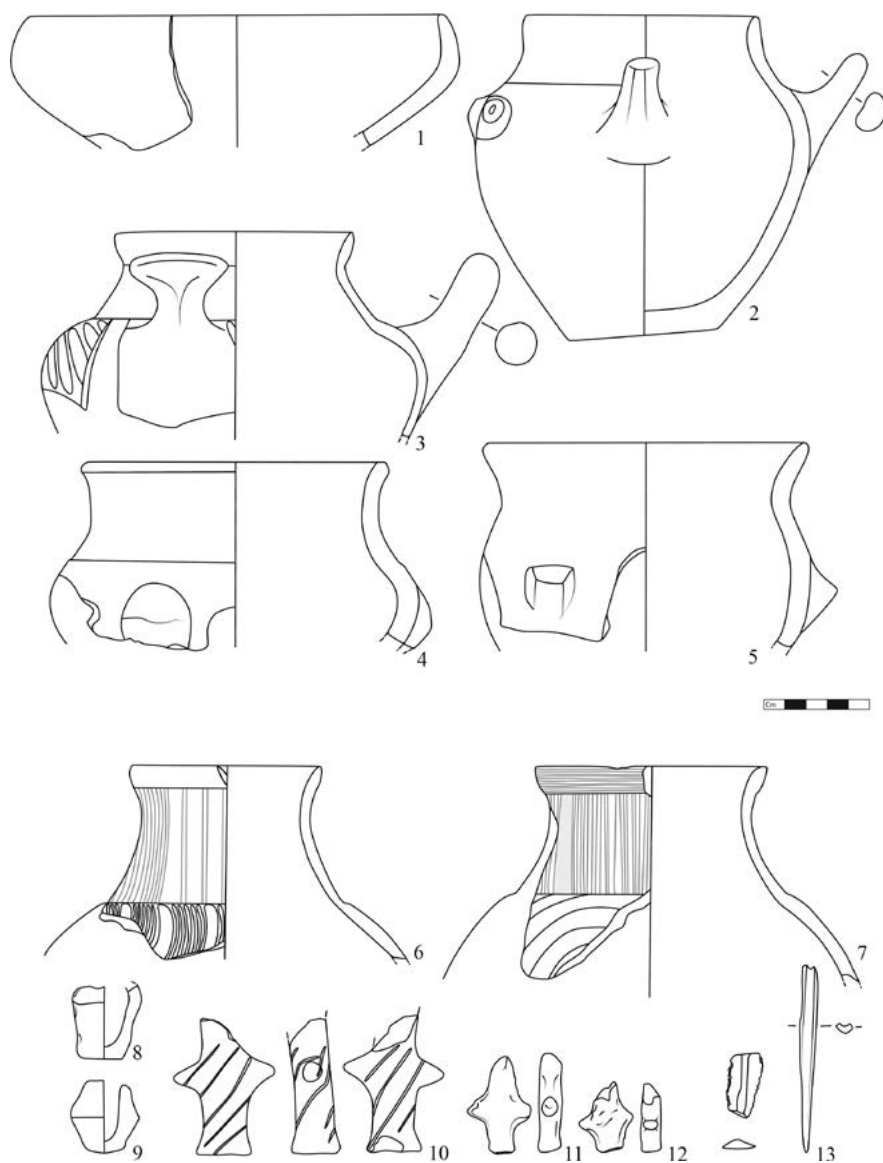


Figure 4. Pottery from the Vinča culture above-ground house, excavated during the 1968 campaign (1–5), and pit investigated in 1970 (6–13), Upper Town. Belgrade City Museum.

N. Tasić reports on an above-ground Vinča culture house from trench XII/9 in the Upper town, near the northern fortification.¹⁸ In a brief excavation report, Tasić describes the house as being rectangular in shape, with a floor made of beaten earth.¹⁹ A thermal structure – an oven or a hearth – is mentioned as the only inventory of this house. Several pottery fragments kept in the Belgrade City Museum originate from this house, being the only surviving testimony of the existence of this Late Neolithic house (Fig. 4/1–5).

The most recent rescue excavations, carried out within the restoration and conservation project of Mehmed Pasha Sokolović's Fountain in the zone of the North-western Rampart of the Roman Castrum, uncovered the remains of one more Vinča culture above-ground house.²⁰ This structure has not been fully excavated; its remains were just documented under the layer of the base of the Roman rampart. A brief report mentions that the house was built in the wattle and daub technique, with visible traces of wooden poles on the remains of the burnt house walls.²¹ No information on the size and orientation of the house was given, adding only a short description on the finds, which include various bowl fragments, snails and river shells, as well as one fragmented leg of the so-called altar vessel.²²

Dug-out Vinča culture structures were reported from almost every excavation campaign carried out in the Upper town of the Belgrade fortress.²³ Dozens of hand-coloured ground plans from 1963 investigations show numerous pits of circular, oval, and irregular shape from trenches A/2–5, B/2, 3, 8, C/1–3, and D/1–3. These pits vary in size from one to four meters in diameter. Larger ones, namely pits from trenches A/4 and A/5, were interpreted as semi-dug-out houses,²⁴ although there are no visible elements or structures suggesting such an interpretation (post

¹⁸ There is not a single file in the Belgrade City Museum Documentation Centre that mentions or describes this house.

¹⁹ Tasić 1968, 20.

²⁰ Mićović 2018.

²¹ The published information that the horizon of this Vinča culture house is 1.20 m thick is probably a typographical error (Mićović 2018, 9).

²² Mićović 2018, 9, 10.

²³ Cf. Биких & Иванишевић 1996; Birtašević 1970; Popović 1973; Tasić 1968; Todorović 1963.

²⁴ Todorović 1963.

holes, thermal structures, burnt daub and wall fragments, etc.). Two examples of dug-out structures deserve closer attention, since the quality of surviving documentation offers a more analytical approach. One Late Neolithic dug-out structure was partially explored during the 1961 excavations, in the vicinity of the northern rampart in the Upper town of the fortress.²⁵ The structure is of unknown shape and dimensions, but judging by the abundance of the material kept in the Belgrade City Museum, it must have been a larger refuse pit or something of that kind. Typical Late Vinča culture pottery was recovered from the fill of the pit, alongside bone and stone tools, as well as fragmented clay figurines (Fig. 1, 2).²⁶ An irregular oval shaped pit was found in the vicinity of Ali Pasha's turbe in the Upper town of the Belgrade fortress.²⁷ The size of the pit could not be recorded since one of its sides was extended outside of the trench. It is said that the floor of the pit was made of beaten clay, and that the remains of a hearth were located on one bank inside the pit, hence it was interpreted as most probably functioning as a dug-out house.²⁸ The inventory of this pit consisted of numerous pottery sherds, mainly fragments of typical Late Vinča culture pottery (i. e. biconical bowls with cylindrical and conical necks, bowls with an everted rim, globular bowls with cylindrical necks, etc.), decorated with typical channelled motifs (Fig. 7, 8). River shells were also found in the fill of the pit,²⁹ as was the case with similar finds of snails and shells from the above-ground house near Mehmed Pasha Sokolović's fountain.³⁰

Late Neolithic material culture from the Belgrade fortress mainly comprises a typologically homogenous pottery assemblage, characteristic for the Late Vinča culture (Vinča D or the Vinča–Pločnik phase). In terms of vessel shapes, the most prominent ones are conical bowls with

²⁵ Todorović 1961.

²⁶ It is interesting to note that the material from that pit was labelled as originating from the Eneolithic pit/dug-out. It is a remarkable note for the history of Serbian/Yugoslav prehistoric archaeology in terms of chronological positioning of the Late Vinča culture to the Eneolithic period instead of the Neolithic, an issue that was not debated methodologically during the 1960s, but was only tackled occasionally (cf. Гавела 1956–1957; Jovanović & Glišić 1961; Тасић 1957; Тодоровић & Цермановић 1961), since the first publication of the Pločnik site as *Eine prähistorische Ansiedlung aus der Kupferzeit* (Grbić 1929).

²⁷ Бикић & Иванишевић 1996.

²⁸ *Ibid.* 256.

²⁹ *Ibid.*

³⁰ Mićović 2018, 9, figure 4.

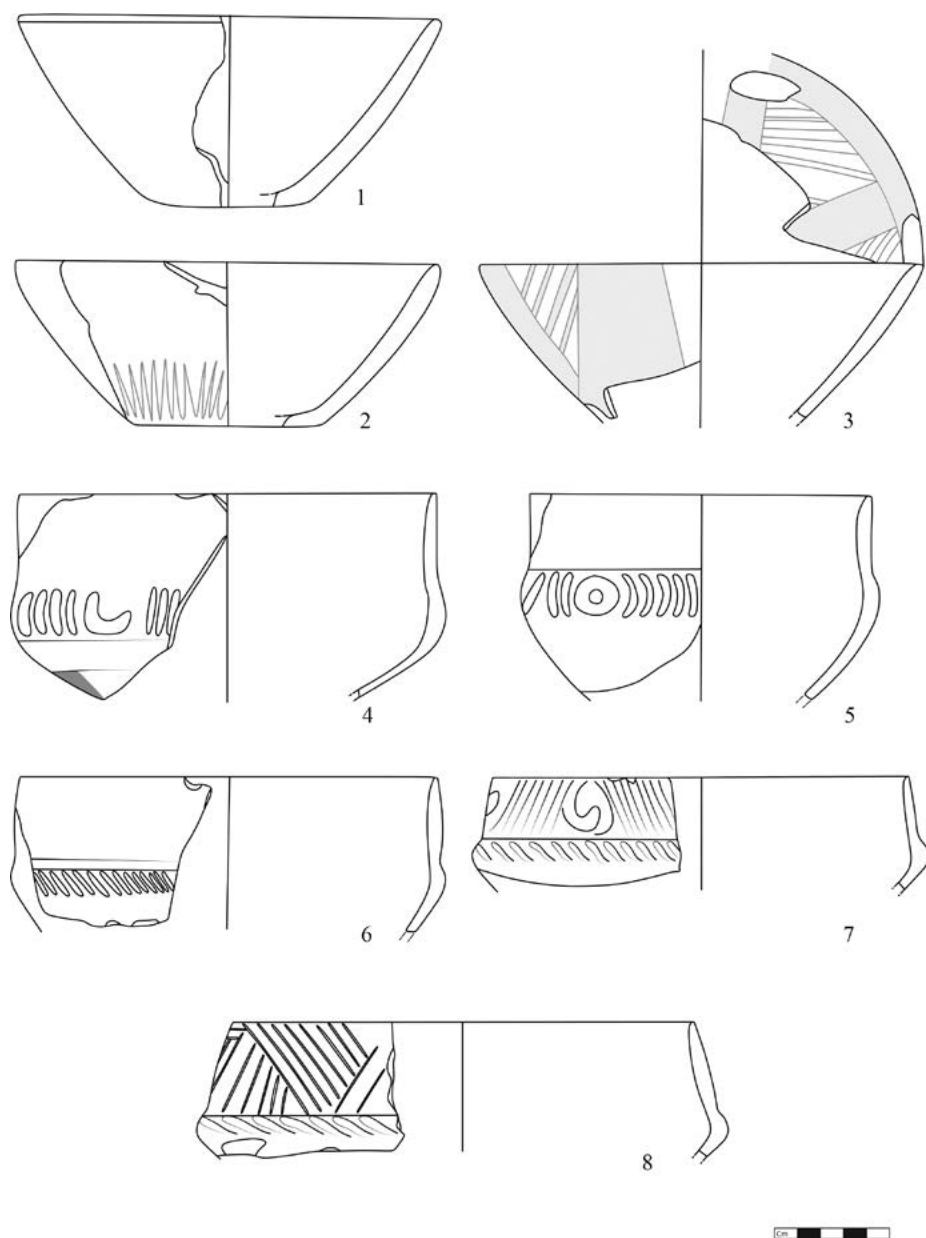


Figure 2. Pottery from the Vinča culture dug-out structure, excavated during the 1961 investigations in the Upper Town, Belgrade City Museum.

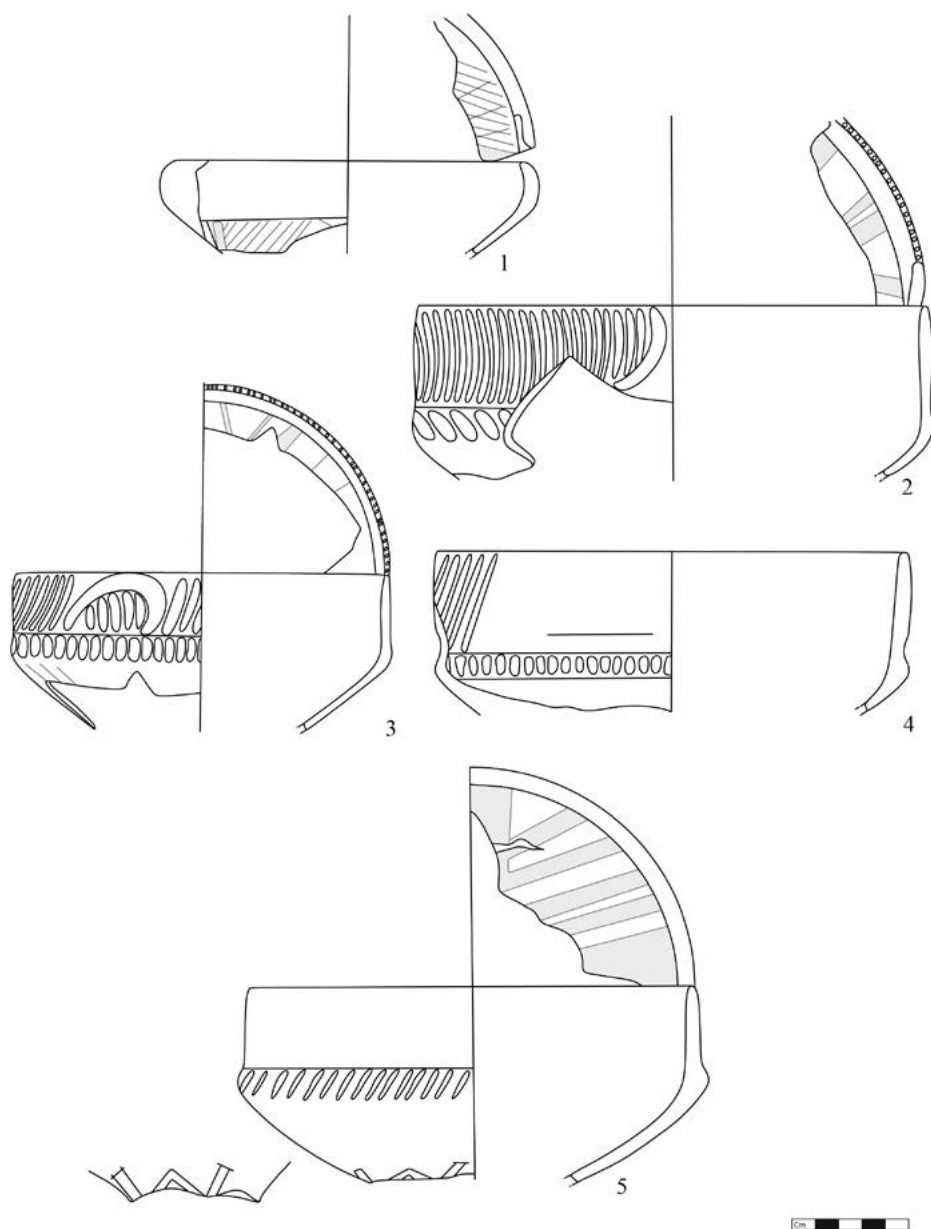


Figure 7. Pottery from the Vinča culture dug-out structure, excavated during the 1988 investigations in the Upper Town. Belgrade City Museum.

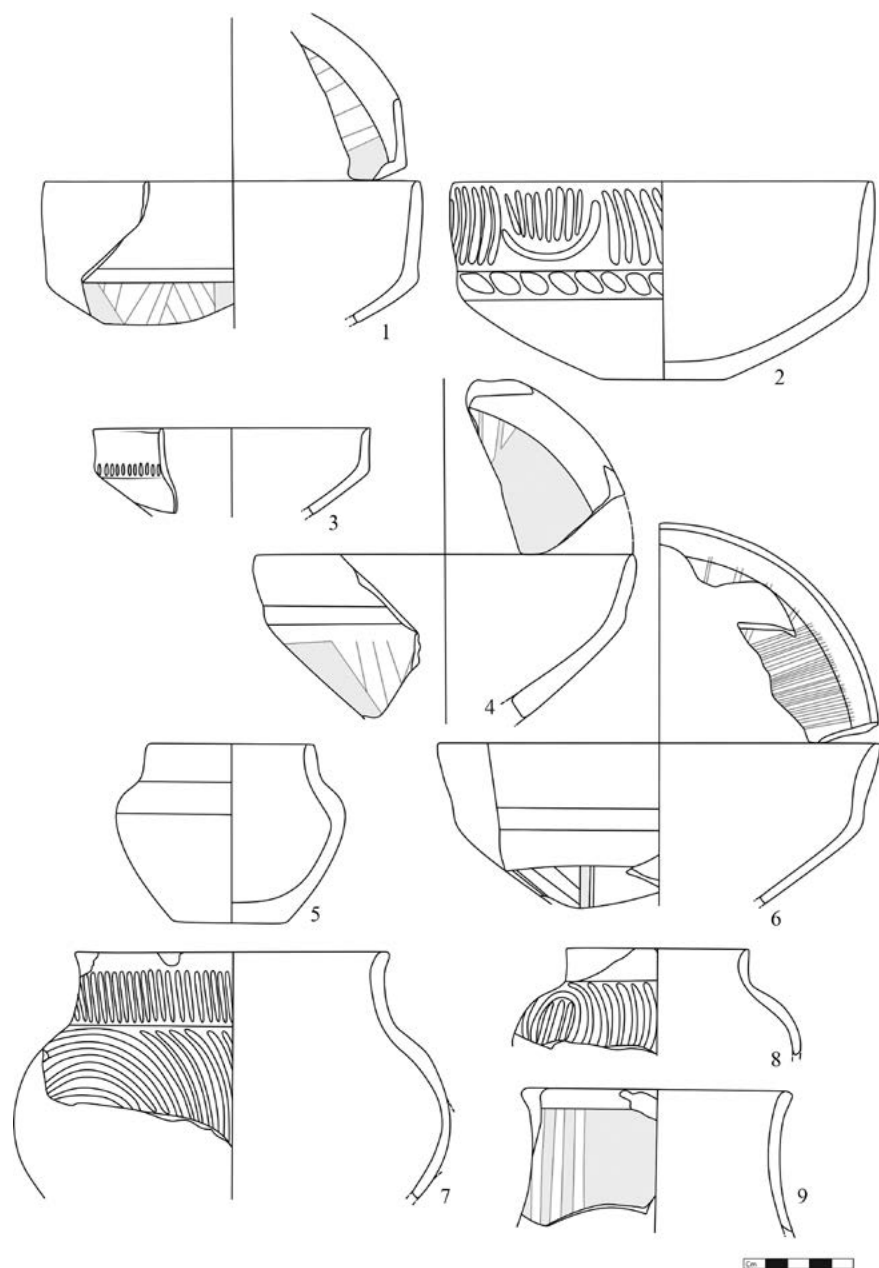


Figure 8. Pottery from the Vinča culture dug-out structure, excavated during the 1988 investigations in the Upper Town. Belgrade City Museum.

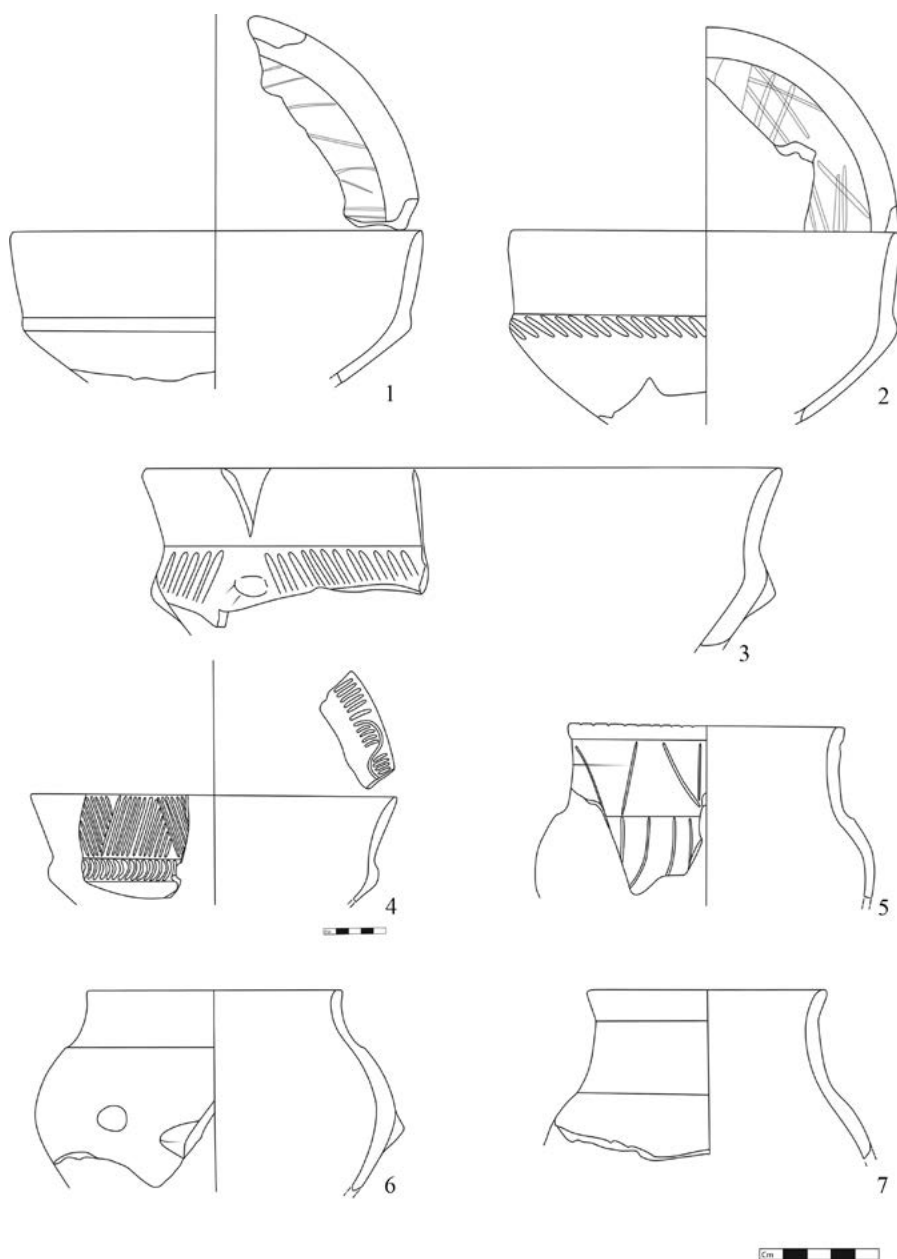


Figure 3. Pottery from the Vinča culture dug-out structure, excavated during the 1961 investigations in the Upper Town. Belgrade City Museum.

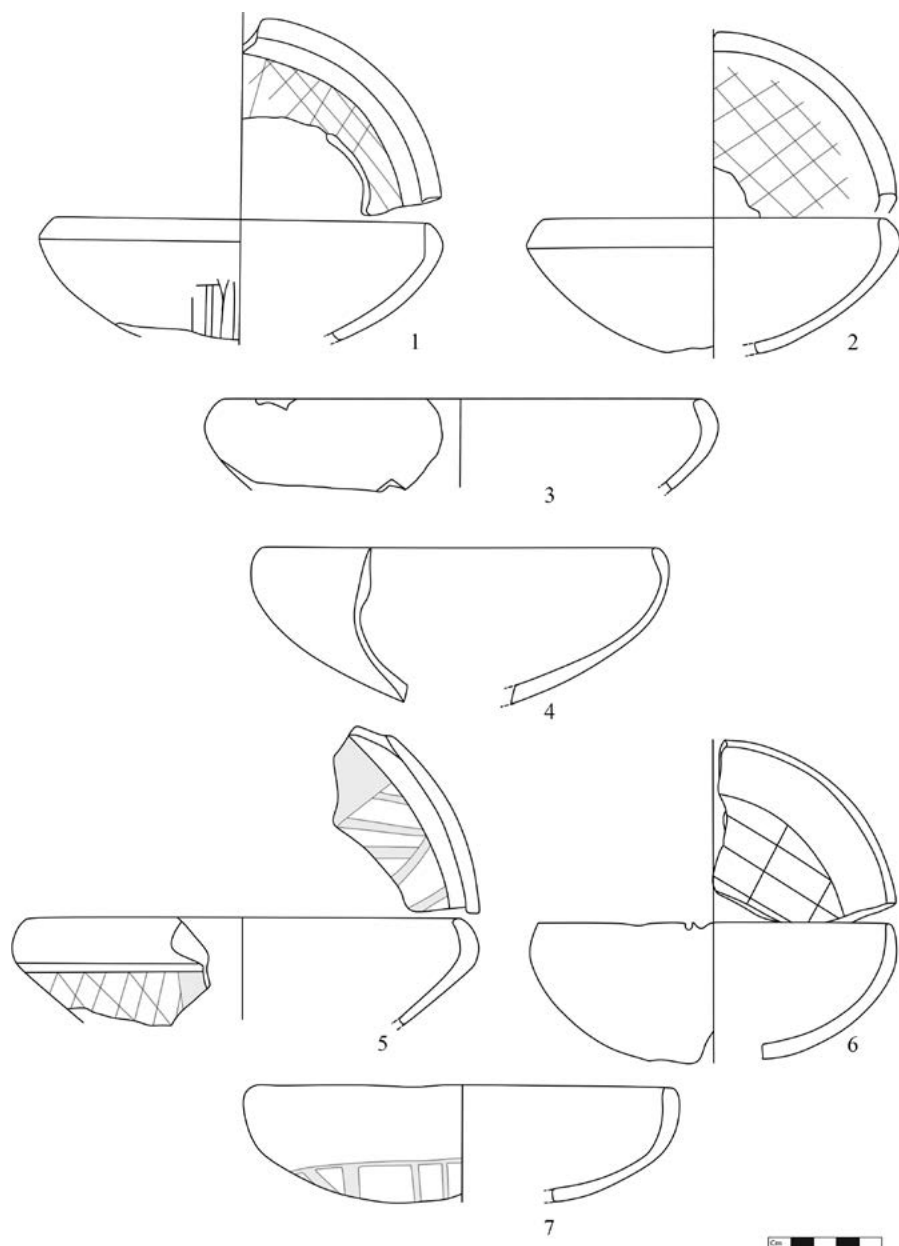


Figure 5. Pottery from the Vinča culture pit, investigated in 1970 in the Upper Town. Belgrade City Museum.

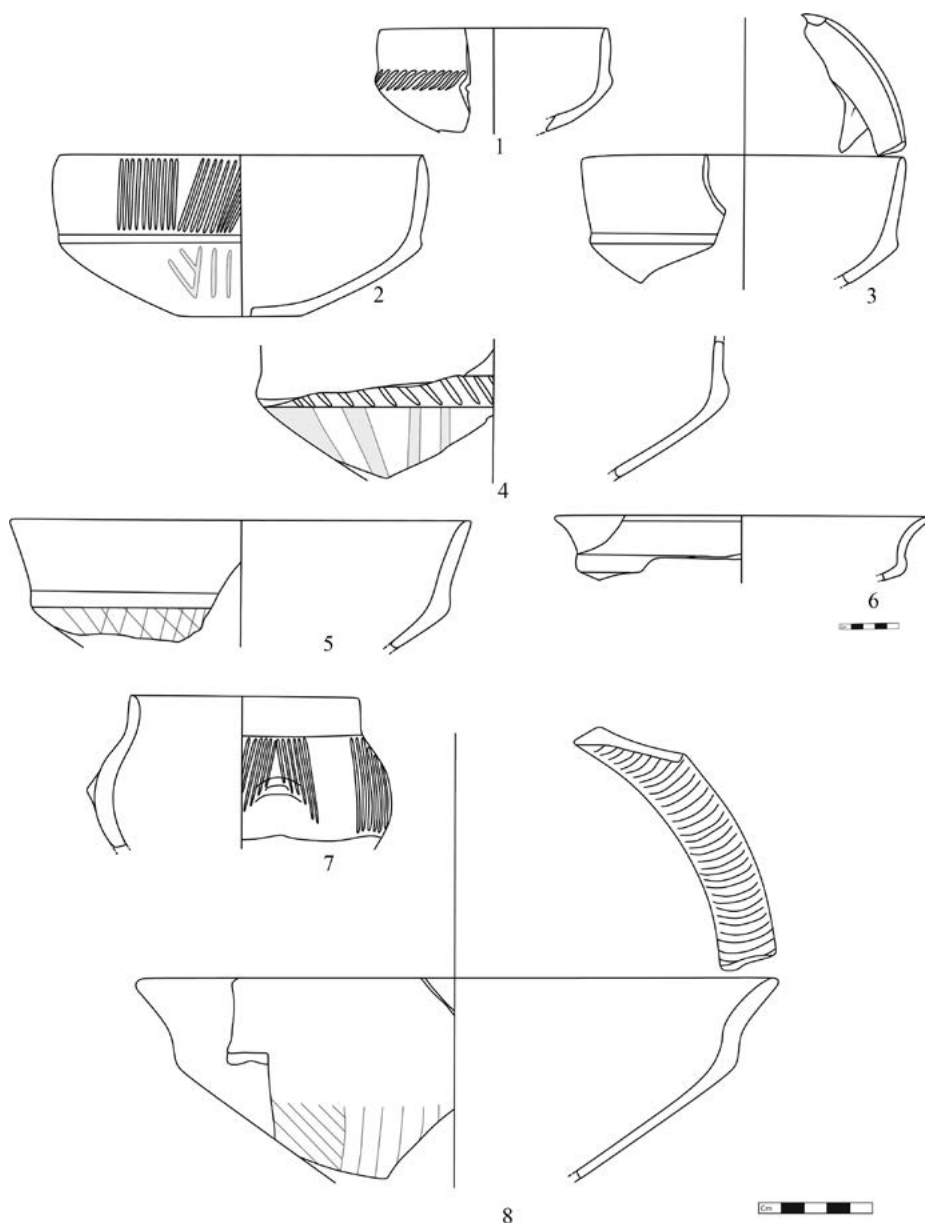


Figure 6. Pottery from the Vinča culture pit, investigated in 1970 in the Upper Town. Belgrade City Museum.

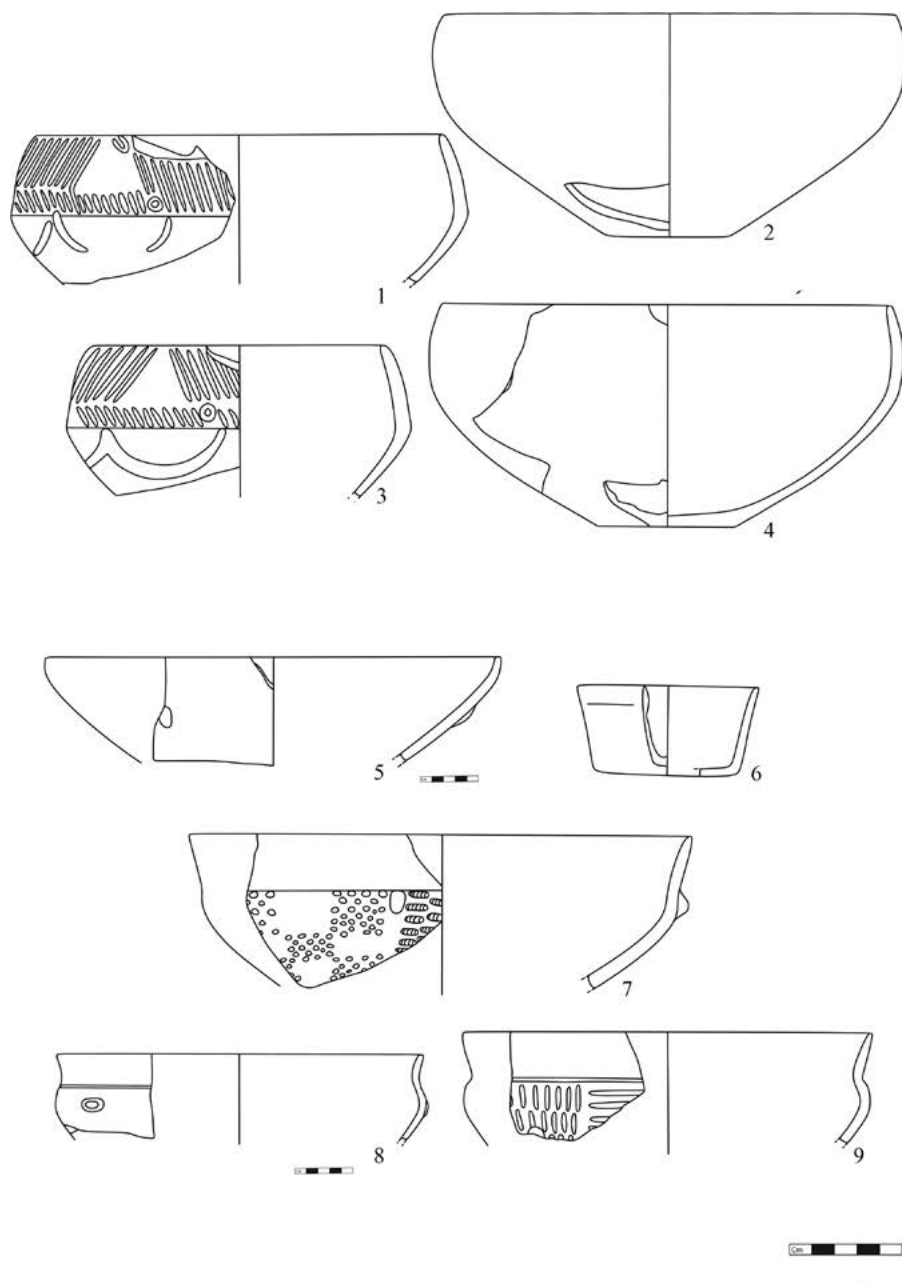


Figure 9. Pottery from the Vinča culture dug-out structure, excavated during the 1988 investigations (1–4), and Kostolac culture pit investigated during the 2004 campaign (5–9), Upper Town, Belgrade City Museum.

an everted rim (Fig. 4/1, 5/1–5, 7/1), a sort of *Leitfossil* of the Late Vinča D phase,³¹ various types of biconical bowls with a prominent shoulder and cylindrical or a conical neck (Fig. 2/4–8, 3/1–4, Fig. 6, Fig. 7/5), also very typical for the Late Vinča culture.³² Globular bowls with a pronounced neck (Fig. 3/5–7; 4/3–5; 6/7; 8/7, 8) are among the most numerous bowl types from the Belgrade fortress, and are very well represented in other Late Vinča assemblages.³³ Lavishly decorated bowls of a simple conical form make a smaller part of the Belgrade fortress pottery corpus (Fig. 2/1–3). Other types of storage and cooking vessels, which are not highly sensitive in terms of chronology, are present also, like amphorae with a high cylindrical neck, a pear shaped slender body, and strap handles (Fig. 4/6, 7; 8/9); pear shaped pots and pithoi; and shallow baking pans. Several miniature vessels imitating the form of the larger sized pots were found in pit 1 during the 1970 excavations in the Upper town (Fig. 4/8, 9). Decorative techniques and motifs are also typical for Late Vinča culture. Slanting (Fig. 2/6–8; 3/2–4; 4/3; 6/1, 2, 4, 6, 7; 7/2–5; 9/1, 3), arched, circular, or spiral channelled fields (Fig. 2/4, 5; 4/6, 7; 8/2, 7, 8) are present on the shoulder, belly, or neck of the biconical bowls, burnished linear fields and net-like arrangements are also present on the lower part of the bowls (Fig. 8/2; 5/5, 7; 6/2, 4, 5, 7, 8; 8/1, 4, 6), or on the neck of the amphorae (Fig. 4/6, 7; 8/9), as well as on the interior of the vessels (Fig. 8/3; 3/1, 2; 5/1, 2, 5, 6; 7/1–3, 5; 8/1, 4, 6). A few sherds are ornamented with simple incised linear motifs, that are often referred to as the so-called Vinča signs (Fig. 5/1; 7/5).

Alongside the typical repertoire of Late Vinča culture pottery, numerous other finds originate from the Neolithic layers of the Belgrade fortress. Polished stone tools in the form of axes, adzes, chisels, picks, and hammers were most often made of the so-called light white stone, another strong indicator of the Late Vinča culture phase.³⁴ A semi-finished perforated axe of the II/2 type, found during the 1971 excavations, and a similar semi-finished perforated hammer of the VII/1 type,³⁵ speak about the local production of ground stone tools. Bone tools are represented by

³¹ Cf. Spasić, Živanović & Stojić 2018; Svilar 2022; Vuković 2011.

³² Vuković 2011.

³³ Madas 1988; Spasić 2011.

³⁴ Cf. Antonović 2003.

³⁵ Cf. *Ibid.* 57, 58, fig. 36.

several finds of awls and points, which are not so chronologically sensitive, but have numerous analogies from Late Vinča culture settlements.³⁶ Three typical Late Vinča culture clay figurines were recovered from a dug-out pit excavated during the 1970 campaign in the Upper town of the fortress (Fig. 4/10–12). All figurines are highly schematised and stylised, small in size, and with few details – they represent human or hybrid creatures in a standing position. General trends in the iconography of figurines in the Late Vinča culture, in comparison with earlier phases, show a decrease in the size of objects, an obvious decline in manufacturing technology, and an intensification in production of highly schematised and stylised figurines.³⁷

Neolithic material culture from Belgrade corresponds well with ceramic assemblages from sites with the latest phases of the Vinča culture, such as Divostin,³⁸ Jakovo–Kormadin,³⁹ Mali Borak–Crkvine,⁴⁰ Obrež–Beletinci,⁴¹ and Stubline–Crkvine.⁴² In terms of absolute chronology, Neolithic layers from the Belgrade fortress can be dated with relative security to the Vinča D phase, based on analogies with sites with similar pottery. This phase was recently firmly set in the period 4810/4740 cal. BC–4490/4415 cal. BC.⁴³

Late Copper Age Settlement

The Late Copper age settlement in the Belgrade fortress was founded around a millennium and a half after the Vinča culture communities left the site. Main Late Copper age occupation layers are formed in the Upper town of the fortress. The stratigraphic position of this horizon is different, as there is no direct layering of Neolithic and Copper Age structures in one place. Instead, most of the documentation signals that beneath the Roman layers of the fortress there sometimes appears a layer with mixed prehistoric and Roman material, while either Neolithic or

³⁶ Cf. Витезовић 2010.

³⁷ Гарашанин 1968; Срејовић 1968.

³⁸ Madas 1988.

³⁹ Jovanović & Glišić 1961.

⁴⁰ Спасић 2011.

⁴¹ Брукнер 1962.

⁴² Спасић 2013.

⁴³ Whittle et al. 2016, 31.

Copper Age horizons lay beneath. Although just a few Copper Age structures were excavated and properly documented in the course of the last sixty years of excavations, abundant material culture recovered from the Belgrade fortress clearly demonstrates that it was the Kostolac culture communities that settled the hill above the rivers, sometime at the end of the fourth millennium BC.

Several Kostolac culture dug-out structures were investigated on the plateau of the Upper town of the Belgrade fortress. Late Copper Age pits were found during excavations in trenches opened at the site of the so-called Zindan Gate in 1968,⁴⁴ as well as in the first decades of twenty-first century;⁴⁵ at the spot of the Dizdar Tower in 1973;⁴⁶ and one pit was excavated in the line of the south-eastern fortification.⁴⁷ Recently, during excavations carried out at the spot of the Sahat Gate, one Kostolac culture dug-out structure was recovered as well.⁴⁸ This pit was initially interpreted as a semi-dug-out pit house. Unfortunately, only part of the pit could be excavated; it was probably oval in shape and, judging by the field photos, it contained remains of a hearth located on the floor of the pit.⁴⁹ There is no evidence of ovens, hearths, or other structures (post holes, daub fragments, etc.) in other Copper Age pits. Abundant Kostolac culture pottery kept in the Prehistoric collection of the Belgrade City Museum, found both in the closed archaeological structures and in the so-called cultural layers, clearly demonstrates that Late Copper Age communities occupied the same area of the Belgrade fortress as the preceding Neolithic inhabitants did – the Upper town of the fortress. The fill of the Kostolac culture pits and dug-outs mainly consisted of numerous fragments of pottery, animal bones, as well as fragmented tools made of polished stone, animal bones, and antlers. A greater amount of pottery was found in some of the pits, for instance in the one excavated at the spot of the Sahat Gate, in which more than 500 pottery sherds and numerous other finds were recovered (Fig. 9/5–9).

⁴⁴ Marjanović-Vujović & Popović 1968, 200.

⁴⁵ Илијић 2008, 187.

⁴⁶ Popović 1973a, 44.

⁴⁷ Popović 1973b, 90.

⁴⁸ Поповић 2006, 15.

⁴⁹ Spasić 2019, 25.

Kostolac material culture from the Belgrade fortress mainly corresponds to the so-called early and middle phase of the culture, which is defined as Kostolac I and II.⁵⁰ These horizons are parallel with the Gomolava IIIb1 and IIIb2 phases, where three successive building horizons were recorded in the vertical stratigraphy of the site.⁵¹ Early Kostolac culture relative dating of some of the material from the Belgrade fortress is firmly confirmed by the presence of vessel shapes and ornaments typical for the earlier Baden culture pottery style – pots decorated with incised lines (Fig. 10/10), and vessels of the so-called *Hängegefäße* type – suspension vessels or cult vessels (Fig. 10/12).⁵² A dominant presence of *Furchenstich* – stab and drag – ornamental techniques and, on the other hand, the presence of shallow hemispherical bowls (Fig. 10/1–4), as well as the occurrence of stamped circles on the vessels of the terrina type (Fig. 12/2), all point to a developed and late phase of the Kostolac culture – Kostolac III in the periodisation of D. Nikolić.⁵³ Similar chronological sequencing was proposed in almost all of the debates concerning the evolution of Kostolac pottery.⁵⁴ Thus, all other main forms of Kostolac culture vessels are present in the Belgrade fortress assemblage also, like fragments of conical cups with high strap handles (Fig. 10/11), various types of biconical bowls with either a cylindrical, concave, or conical neck, and S-profiled bowls with a deeper recipient (Fig. 9/7–9; 10/1–9). Several almost complete vessels of the amphora type, with a pear-shaped body and narrow neck (Fig. 10/13), were also recovered during the excavations in the Upper town of the fortress. The ornamental system of the Kostolac vessels is one of the main characteristics of this pottery style, with stab and drag as one of the leading decorative techniques present on various bowl types (Fig. 9/7, 9; 10/1–9). Incised decoration (Fig. 10/10, 12), as well as plastically applied straps with finger impressions, are also present (Fig. 10/10). Ornamental motifs are usually organised in horizontal fields (Fig. 10/1, 3), or in a combination of horizontal and vertical fields (Fig. 10/7, 9). Hanging triangles and single stamped ornaments are rare.

⁵⁰ Brukner 1979; Nikolić 2000, 59.

⁵¹ Cf. Petrović & Jovanović 2002.

⁵² Cf. Bondár 2009, 276; Kalicz 1963, 32–35; Petrović & Jovanović 2002, 285.

⁵³ Nikolić 2000, 48–66.

⁵⁴ Cf. Balen 2011; Brukner 1979; Nikolić 2000; Petrović & Jovanović 2002; Tasić 1979; Tasić 1995.

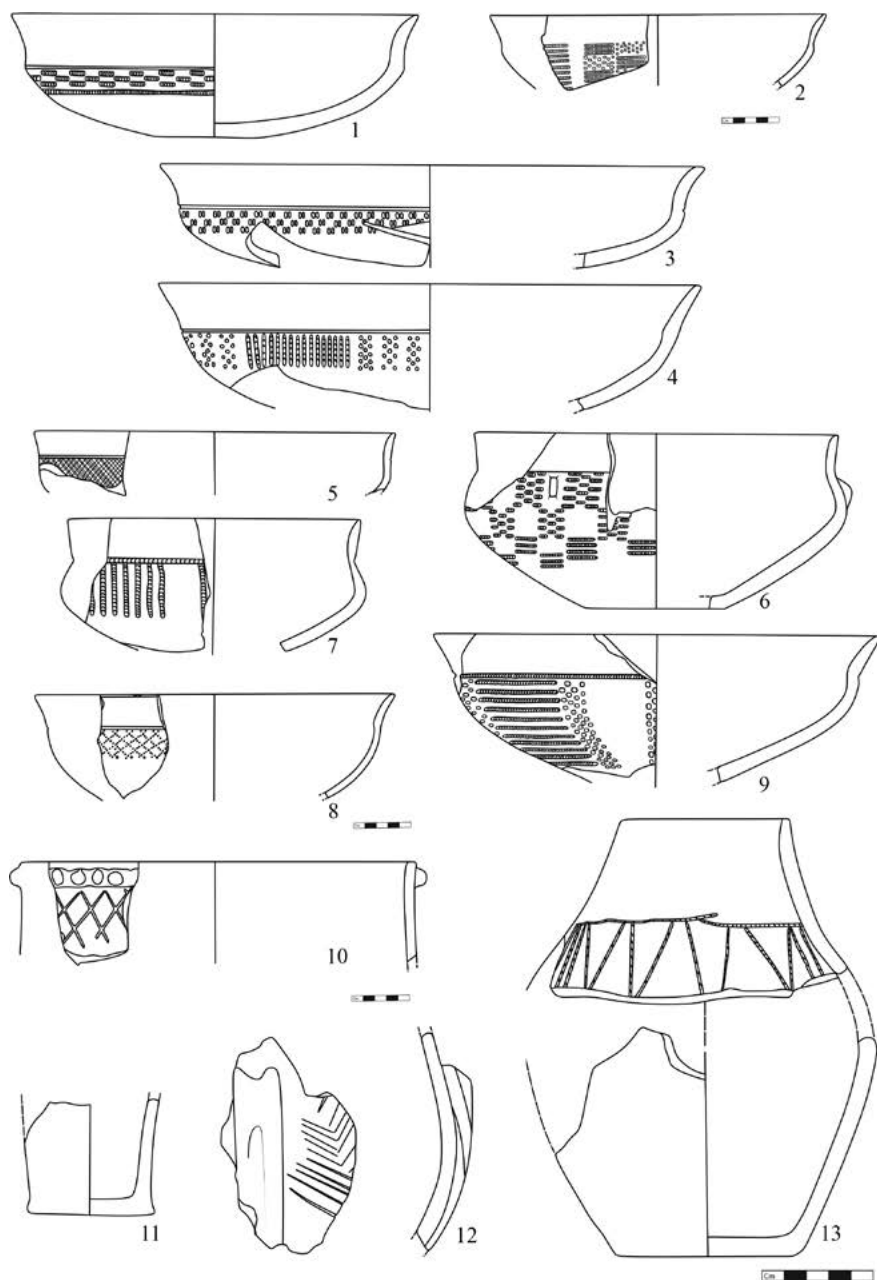


Figure 10. Selection of characteristic Kostolac culture pottery from the Belgrade Fortress. Belgrade City Museum.

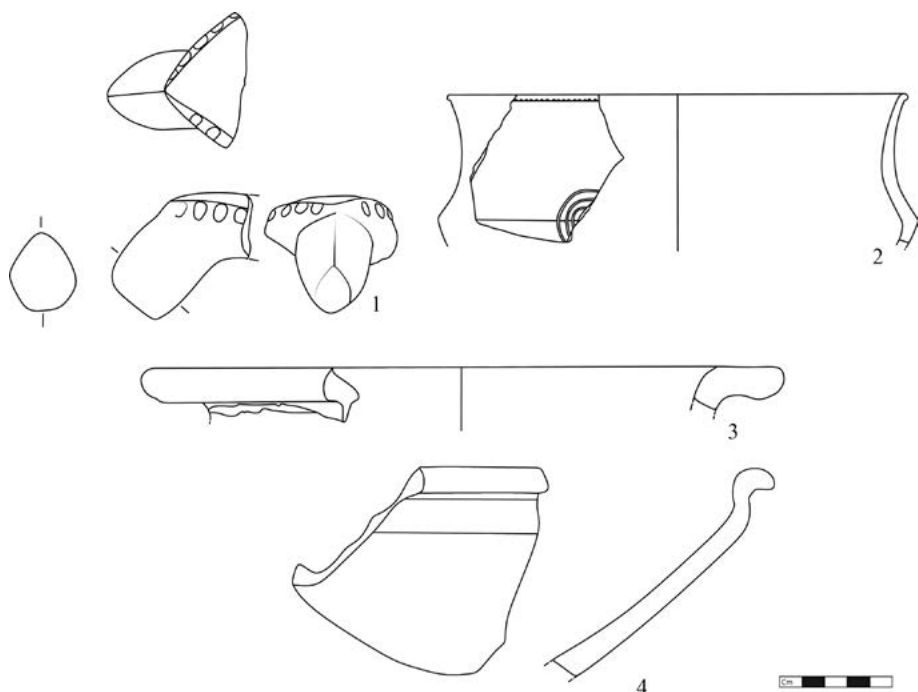


Figure 12. Selection of uncommon pottery from the Belgrade Fortress: Starčevo altar (1), Vučedol-like *terrina* (2), and Late Iron Age pottery (3, 4).

Despite very scarce field data, the physiognomy of the Kostolac culture settlement from the Belgrade fortress is comparable to other neighbouring sites. It was built in a landscape with similar topographic features: a high and dominant river terrace with steep slopes.⁵⁵ The Kostolac culture settlement at Belo Brdo in Vinča,⁵⁶ Karaburma,⁵⁷ and Gardoš–Zemun fortress,⁵⁸ have comparable topographic characteristics, and even similar settlement features consisting of various types of dug-outs and pits, and without a single recorded above-ground structure.⁵⁹ In terms of

⁵⁵ Cf. Nikolić 2000, 40.

⁵⁶ Spasić 2009; Tasić 1984.

⁵⁷ Nikolić 2000, 23.

⁵⁸ *Ibid.* 16.

⁵⁹ The absence of above-ground structures in these settlements should be considered with caution. Such a settlement layout is probably the result of post-depositional devastations, as well as of poor excavation and documentation strategies, since above-ground hous-

absolute chronology, based on the dates from Gomolava and other sites in modern-day Serbia and Croatia, the Kostolac culture settlement from the Belgrade fortress could be roughly dated to the period between 3300 and 2900 BC.⁶⁰

Later Prehistoric Layers

Judging by the remains of the material culture, post-Copper Age occupation of the Belgrade fortress is rather modest. Not a single structure could be dated to this period, with scarce finds of vessel sherds being the only testimony of second and first millennium activity at the site. Several channelled sherds of amphora/urn-like vessels excavated in trench 5/73 located near tower 4 in the Upper town could be securely dated to the later phase of the Belegiš culture (Fig. 11/12, 13). It is worth mentioning that in the immediate proximity to this spot-find, beyond the limits of the fortress, a small necropolis with in-urn cremations from the same period was found at the site of Cincar-Janko Street.⁶¹ After this small Late Bronze Age episode, the site of the Belgrade fortress was again settled during the Early Iron Age. A few sherds of Kalakača type vessels (Fig. 11/1–9), and Basarabi pottery with characteristic S-incised ornaments (Fig. 11/10, 11), were also found in the Upper town. Excavations carried out at the site of the Old Synagogue in Visokog Stevana Street, less than a kilometer from the fortress, revealed remains of a dug-out house from the Kalakača period,⁶² while during earlier excavations at the nearby Jevrejska 3 Street, traces of Early Iron Age Bosut culture occupation were found also, alongside typical Basarabi pottery.⁶³

The presence of several typical late La Tène pottery fragments from the Upper town of the Belgrade fortress (Fig. 12/3, 4), nowadays kept in the Prehistoric collection of the Belgrade City Museum, does not solve a long-standing question of the possible existence of a Celtic *oppidum* at the site.⁶⁴ The fact that, during recent excavations at the nearby site of the

es are the main type of Kostolac culture features (Nikolić 2000, 40–47) as attested on many sites, such as Gomolava (Petrović & Jovanović 2002), and Gradac at Vučedol (Schmidt 1945).

⁶⁰ Cf. Balen 2011, 158–160; Nikolić 2000, 78, 79; Petrović & Jovanović 2002, 298.

⁶¹ Spasić & Mićović 2019.

⁶² Бикић & Бугарски 2022, 12, сл. 3/1–5.

⁶³ Babović 1980.

⁶⁴ Cf. Гавела 1955; Todorović 1972.

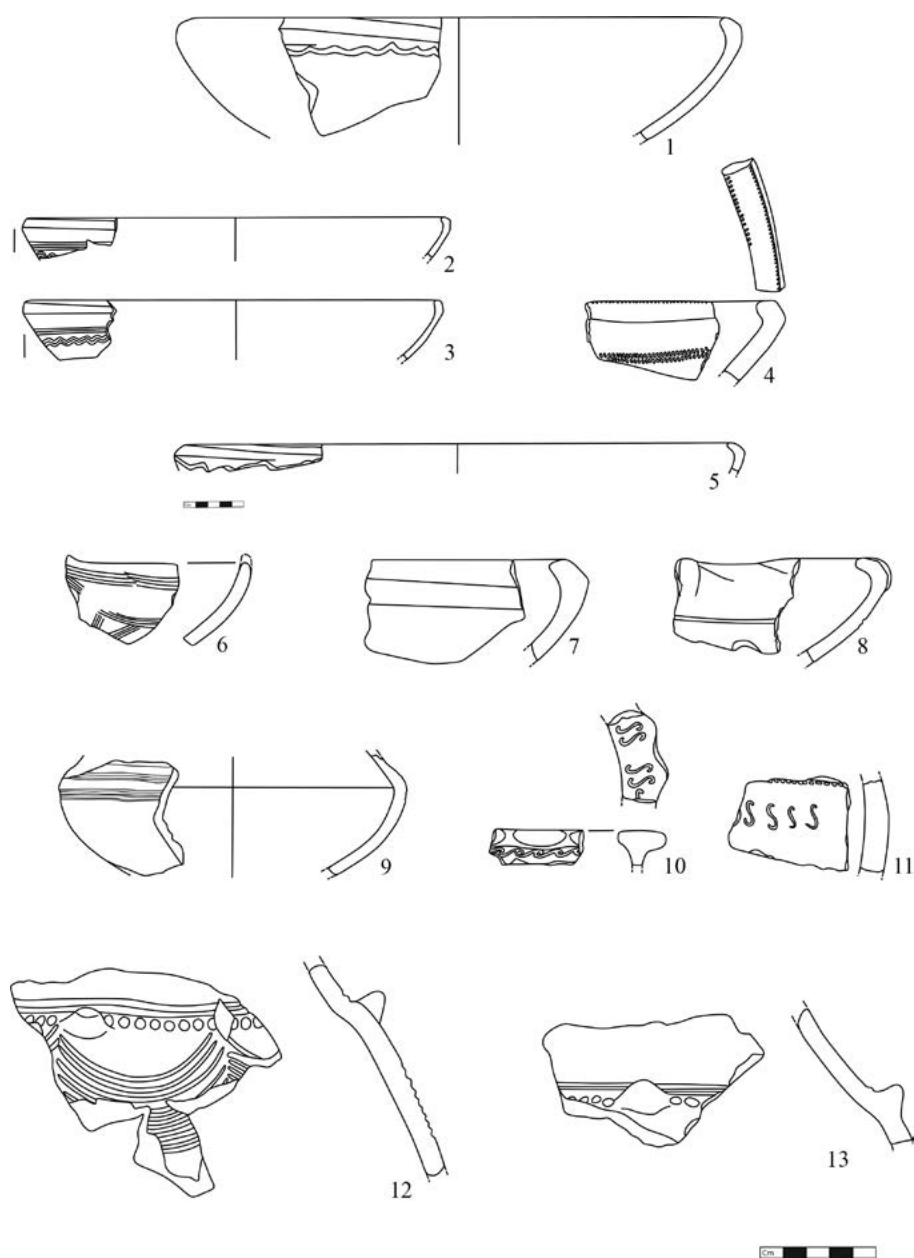


Figure 11. Selection of characteristic Late Bronze Age and Iron Age pottery from the Belgrade Fortress. Belgrade City Museum.

Old Synagogue in Visokog Stevana Street, a part of a late La Tène dug-out house was recorded, speaks about the possibility that the site of the Belgrade fortress may have been inhabited during the Late Iron Age as well. However, the Belgrade fortress *oppidum* dilemma will remain an open question, since no traces of Late Iron Age ditches, trenches, or other typical fortification structures were recorded at the site.

Conclusion

After more than eighty years of archaeological excavations at the site of the Belgrade fortress, this paper offers a preliminary overview of the prehistoric horizons documented so far. The Upper town of the fortress was a primary occupation space throughout prehistory. Vinča culture communities were the first people that settled the site, at some point during the beginning of the forty-ninth century BC, during the Late Neolithic period. The find of a fragmented Neolithic clay altar (Fig. 12/1), which bears close resemblance to typical Starčevo culture objects, should be an issue for further research, since not a single recorded find from the Belgrade fortress speaks in favour of Middle Neolithic occupation of the site.⁶⁵ Future investigations should also reveal a finer resolution of the picture of the Late Neolithic settlement. Typical Late Vinča culture settlements from the neighbouring sites in the Belgrade area consisted of dozens of above-ground houses arranged in linear rows⁶⁶ – a structured settlement layout that should be expected at the Belgrade fortress too. The existence of a defensive ditch system that surrounded the Late Neolithic settlement might be expected also.⁶⁷ The current picture of the Late Copper Age settlement is probably biased by the modest excavation data. Future excavations could possibly reveal more complex settlement structures of Kostolac communities with solid above-ground houses built in the wattle and daub technique, besides numerous dug-out features that have already been recorded. Although there is still no data on the exis-

⁶⁵ Possible Middle Neolithic – Starčevo culture pottery has been reported from the site of Kosančićev Venac in the proximate vicinity of the Belgrade fortress, cf. Ђорђевић & Каровић 2021, 42–43.

⁶⁶ Cf. Трипковић 2013.

⁶⁷ Cf. Спасић 2013; Трипковић 2013.

tence of more than one Kostolac culture layer, the presence of both earlier pottery forms and the very late ones that appear in the Vučedol culture also, could be an indication of the longevity of the site in the Late Copper Age.

The fact that humble traces of Late Bronze Age occupation were evidenced in the Upper Town of the Belgrade fortress deserves special attention also, especially in the context of the newly found urn-field graveyard discovered several hundred meters farther at the site of Cincar-Jan-kova Street.⁶⁸ This could be a unique opportunity for the investigation of Late Bronze Age societies in the broader region, since there is scarce evidence for both the settlement and necropolis that were used by the single Belegiš culture community in the Belgrade area. Finally, Late Iron Age occupation of the Belgrade fortress site is unambiguously confirmed by the presence of several typical Late La Tène pottery fragments. Several sherds do not make an *oppidum*, but it could be an important clue for further investigations and research projects at the site. Revisions of the earliest Roman pottery assemblages could also reveal presence of misdated La Tène pottery, but the existence of more complex proto-historic settlement structures (defensive ditches and trenches, more solid above-ground structures, workshops, etc.) must be addressed through future excavations and research projects.

⁶⁸ Spasić & Mićović 2019.

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Blagoje Govedarica*

*Eurasia Department – German Archaeological Institute
Berlin, Germany*

The symbolism of the large bowl from Grave 4 at the Varna I necropolis

Abstract: The large bowl from one of the cenotaphs in the core of the necropolis Varna I (Grave 4) is distinctive not only in its dimensions, but also in the great symbolic value expressed in its high-quality artisanship and its contents. The bowl bears decorative motifs created by a precise and effective contrasting of the gilded and black-polished zones on the entire inner surface of the pot and on its rim. In that bowl there was also another vessel with gold decoration, an anthropomorphic bone idol, several dentalium shells, and various stone, flint, and copper tools. Decorating prehistoric pottery with gold is an unprecedented luxury, related exclusively to the Late Copper Age of the Eastern Balkans. Recognisable in the gilded decoration of the large bowl from grave 4 are figural motifs with the principle of cyclicity and the circular movement of nature. The representations on the 'slices' have been interpreted as four ships with sails sailing in a circle.

Keywords: Balkans Copper Age, Necropolis of Varna I, Symbolic of gilded pottery, Oldest picture of sailing ship

Introductory notes on the necropolis of Varna I and Grave 4

The Copper Age necropolis Varna I was discovered back in 1972 in the western industrial zone of the large port city of Varna.¹ During the long-term investigations that ensued, approximately 310 graves were excavated.² The results of this research have so far been only selectively and partially published, with mostly the rich graves in the so-called core

* Blagoje.Govedarica@dainst.de

¹ Not far from this necropolis, a group of three graves was discovered, designated as Varna II and dated to the Early Copper Age, following the Bulgarian chronology. Compare Иванов 1978a, 81 ff; Govedarica 2004, 297 ff.

² Иванов 1975, 1 ff; Ivanov 1978, 13–26; 1991, 125; Slavchev 2010, 198.

area, that is, the ritual centre of the necropolis, presented.³ Nevertheless, this material has already sufficiently demonstrated that this is one of the most significant archaeological discoveries in Europe in the last hundred years. The graves published were examined in various ways, from both cultural and chronological perspectives.⁴ Therefore, even though a comprehensive publication of all the finds has yet to follow, it is clear that without this unique necropolis today there can be no serious consideration of the European Eneolithic, that is, the Copper Age.

The afore-mentioned core area of the necropolis contained the richest skeletal grave of the cemetery, Grave 43, as well as several types of unusually rich symbolic graves. It is interesting that this most important part of the necropolis was not placed centrally, but was located on the south-eastern edge of the funerary area, near the sea, which most likely was not unintentional. Grave 4, which is in the focus of interest here, is one of the graves in this group. According to the classification by Ivan Ivanov, Grave 4 belongs to the first type of symbolic graves, which are those that in all aspects emulate a real burial, yet without the presence of the deceased.⁵ Therefore, these are classic cenotaphs, that is, tombs dedicated to the deceased who had died in some other place, inaccessible or unidentified. Grave 1 and Grave 36 also belong to this type of symbolic burial.⁶ These three cenotaphs are richly furnished with, among others, the insignia of power, which clearly indicates that they were dedicated to individuals of the highest social rank.

Grave 4 had the following dimensions: length 2.1 m; width 0.95 m; and depth 2.1 m, and was oriented NNW–SSE.⁷ At the bottom of the burial pit, a zone with a darker matrix was observed running lengthwise along the middle, the size of which was about 1.8 m in length and 0.5–0.8 m

³ Ivanov 1988b, 181 ff; Ivanov 1991, 131 ff; Todorova & Vajsov, 2001, 104 ff. For the characterisation as “ritual centre of the necropolis” see Lichardus 1988, 50–51; Hansen 2020, 59; Govedarica 2023, 9 ff.

⁴ Todorova 1986, 281 ff; Lichardus 1991, 167 ff; Nikolov 1991, 157 ff; Petrova 2016, 123 ff.

⁵ Ivanov 1991, 127.

⁶ Grave 1 is usually classified as a cenotaph. However, this is not entirely proven, because its contents were not fully documented. The burial pit had been destroyed by a machine excavator before the necropolis was discovered, while a reconstruction of the contents of the grave and the position of the finds were published later, mostly based on the statement of the excavator operator. Compare Ivanov 1991, 127, 131.

⁷ The details on this and other graves are given according to the information in the catalogues published by Ivanov from 1988 and 1991. See footnote 1.

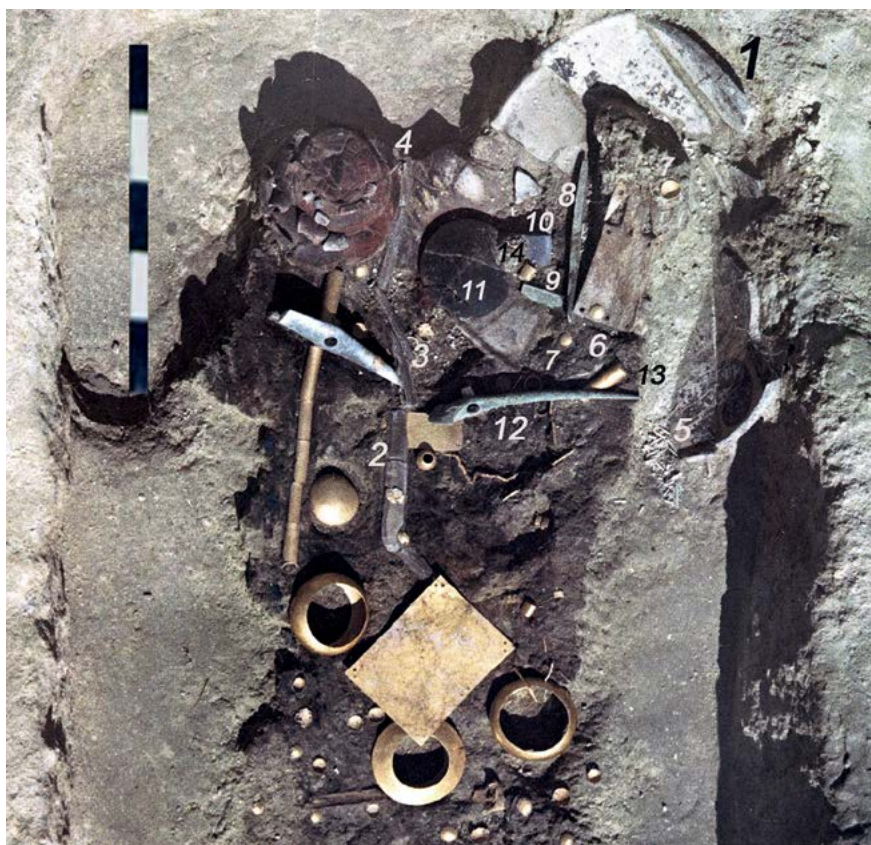


Figure 1 – North-western part of Grave 4. Govedarica (based on Ivanov 1988a Abb. 24)

in width, representing traces of a mat/cover made of organic material and of sprinklings of ochre, which would be performed during the ceremony of the pseudo-burial. There were 36 types of grave goods within this zone, amounting to more than 2000 individual objects.⁸ It is not our intention here to describe in detail all the objects from this grave, as the reader can find comprehensive information about them in the above-cited catalogues authored by Ivan Ivanov. However, it is worth emphasising that the majority of grave goods was concentrated in the north-west sec-

⁸ Todorova and Vajsov state a total of 339 individual grave goods, including various types of beads, whereas the dentalium shell finds were not counted individually. See Todorova & Vajsov 2001, 105–106.

tion of the darker-colour zone at the bottom of the pit. Among the goods was a ceremonial stone axe with a gold-coated handle, like a sceptre and a sign of supreme power; a warrior copper axe of the Vidra-type, and an axe of the Pickelaxt-type (pickaxe), as symbols of belonging to a warrior class; several long flint daggers; cult objects; numerous pieces of jewellery, and so on (Fig. 1). Bearing all this in mind, along with the fact that a large number of the objects were made of gold (a total of 1.518 kg of gold finds), this grave emerges as the richest among the Varna graves published until now, and most likely in the entire cemetery.⁹

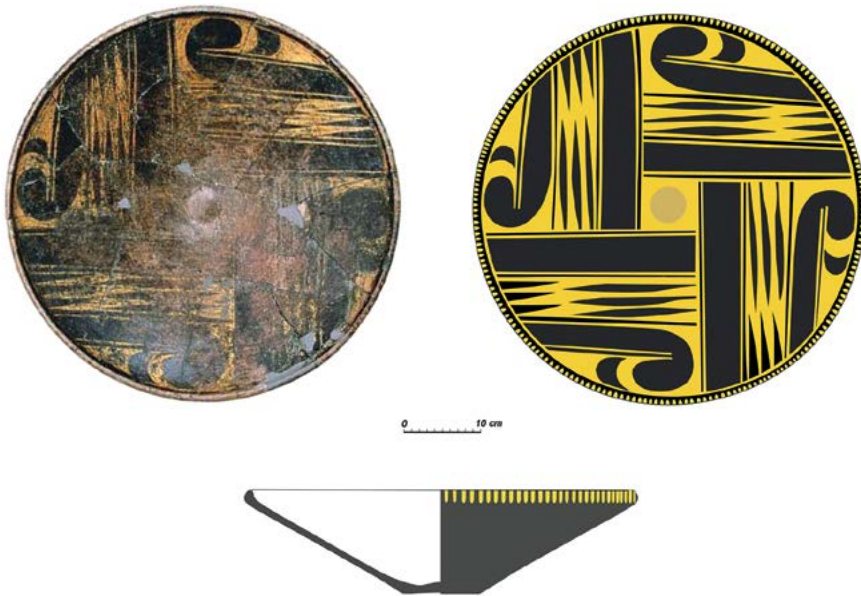


Figure 2 – The large bowl from Grave 4, Govedarica (based on Ivanov 1988a Abb. 19; Uzunov 2019 Fig. 1; Hansen 2020 Abb. 1)

Description of the large bowl and its contents

Besides the multitude of various objects scattered within the darker-colour matrix, Grave 4 stands out also because the area in the northern corner of the burial pit, which in a real burial would extend next to the head

⁹ Todorova & Vajsov 2001, 105–106.

of the deceased, was dominated by a bowl that is 52 cm in diameter and 13 cm in height, and that contained yet another group of grave goods (Fig. 1,1). The bowl is distinctive not only in its dimensions, but also in the high-quality artisanship and a specific method of decoration. Moreover, it is indicative that the bowl was separated from the rest of the burial by three flint daggers placed contiguously in a NW-SE oriented sequence that is about 60 cm long (Fig. 1,2–4). In this manner, the head end of the grave was longitudinally divided into two parts, south-western and north-eastern, which differ in width as well as in the types and position of the grave goods. The bowl stood in the wider and slightly elevated north-eastern half of this part of the burial pit. Viewed together, these characteristics suggest that the bowl represented a separate component of Grave 4, which gives the vessel and its contents a special significance.

The large bowl was made of black-polished ceramic.¹⁰ It bears decorative motifs designed by a precise and effective contrasting of the gilded and black-polished zones on the entire inner surface of the pot and on its rim (Fig. 2). Thereby, the gold-coated surface mostly represents “negative space”, while the black-polished surface was used for the ornamentation itself, which, as will be discussed below, also includes figural representations. The decorated surface is evenly divided by four massive ornamental bands placed in a way that creates an illusion of four rotating T-shaped ornaments (Fig. 2). In this fashion four “slices” were formed that curve towards the rim of the vessel, while an empty gilded square-shaped area was left in the middle, with a small concave base in its centre (Fig. 2).

Without doubt the most interesting part of this ornamental composition are the described slices, which repeat the same depiction four times: above the band that forms the base of the representation are three very elongated rhombi, and three similarly stretched-out triangles placed horizontally. In combination with the gilded background, they create an impression of a vertically compressed zigzag band delimited by black lines (Fig. 2). Above this part of the composition is a wide dark band which, on its left side, near the edge of the “slice”, has a part bent backwards that ends in a rounded thickening, thus creating a shape that resembles a lying letter “J” depicted against the gold background. Above the middle part of each of the J-shaped motifs is a black ornament in the

¹⁰ According to Todorova and Vajsov, the surface of the vessel was painted using black Pyrolusite pigment. Todorova & Vajsov 2001, 97.

shape of a sail (Fig. 2). Curiously, the ornamentation of the inner surface of the bowl is not complete – it simply stops just beneath the rim modelled to resemble a line of beads, leaving all the motifs unfinished. Hence, the rim of the vessel does not mark the boundary of the decorative composition; instead, it only frames it, leaving a narrow but effective gap in between.

Atop the large bowl, in the layer extending at the level of the bowl's rim, another smaller vessel was found, also black-polished with gold decoration. This pot has the form of a biconical cup with a lid; its overall height is 9.8 cm and its width is 12.5 cm. It is decorated with a golden frieze running around the upper body, whereas the neck bears a separate ornament, in the form of a narrow horizontal golden band around it. In combination with dark downward facing triangles and other geometric ornaments, the frieze gives the impression of a golden sea wave in motion. The lid of the vessel is less well preserved; the remaining traces of the decoration indicate that it also had gold ornaments (Fig. 3,1). Adjacent to this vessel lay a copper awl with a bone handle, its total length being 11.7 cm, and a flint dagger with a broken tip and preserved length of 14.6 cm (Fig. 3,2,3). On the same level, abutting the bowl's rim from the south-west, lay a concentration of approximately 1400 unworked dentalium shells (their length is 1–3 cm; Fig. 1,5).

Underneath these finds, in the centre of the large bowl, was an anthropomorphic bone idol with nine perforations for attaching or hanging (dimensions are L 18.7 cm and W 7.7 cm; Fig. 1,6; 4,1).¹¹ A large number of gold spherical applications lay around the idol (Fig. 1,7). Immediately next to it were two copper chisels, one with a bent shoulder (L 20 cm; Fig. 1,8; 4,4), and another, smaller chisel (L 12.9 cm) with a rounded blade and a straight shoulder (Fig. 1,9; 4,2). Farther to the west lay a trapezoidal stone axe-adze (L 7.1 cm; Fig. 1,10; 4,3). The axe was partially covered by a smaller bowl with the opening facing downwards (Fig. 1,11). The bone idol and the other described finds were initially concentrated at the level of the base of the large bowl, in the area in the middle. However, because the bowl tilted towards the centre of the burial pit due to an uneven pressure of the overlying soil, the finds became spread over the western half of the bowl, as far as to its rim. Discovered in the southern part of

¹¹ Detailed characteristics of these idols are given in Lichardus 1991, 172–173; Todorova & Vajsov 2001, 92–94.

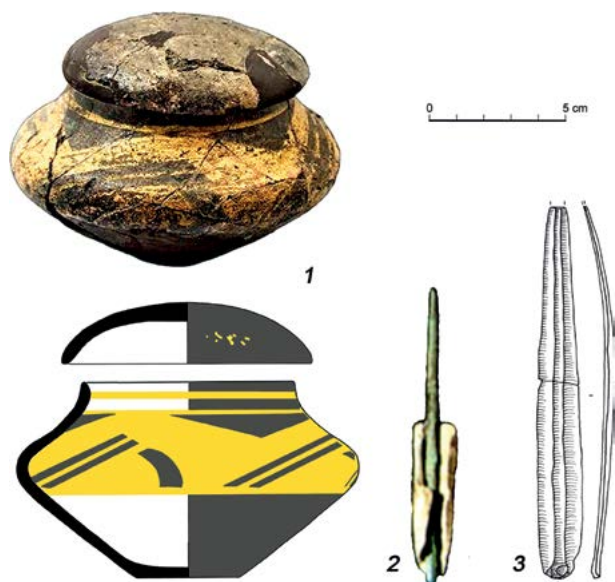


Figure 3 – Finds from the level on top of the bowl. 1 Lichardus 1988 Abb. 57; 3,2 Govedarica (based on Ivanov 1988a Abb. 22; 3,3 Hansen 2020 Abb. 1)

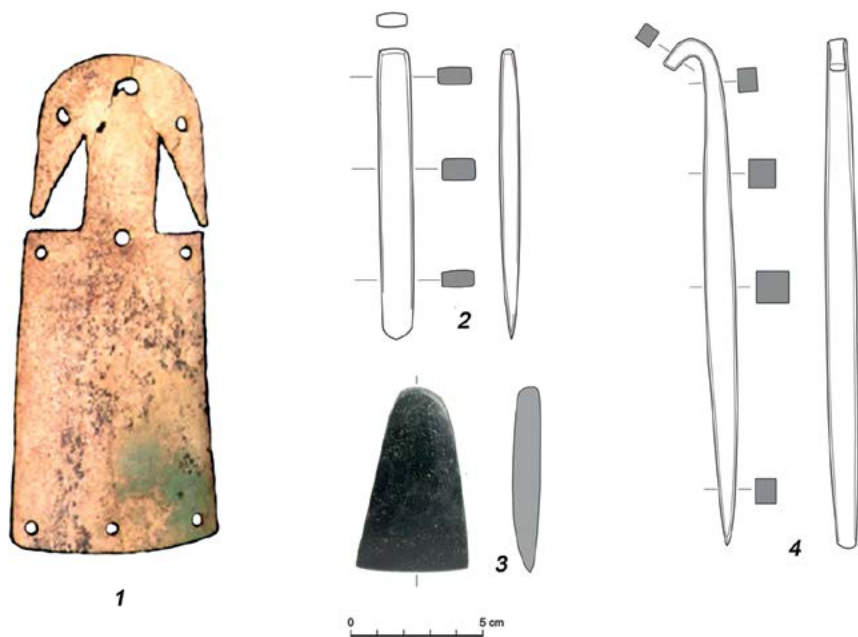


Figure 4 – Contents of the bowl. 1,3 Govedarica (based on Ivanov 1988a Abb. 23 and 22; 4,2,4 Hansen 2020 Abb. 1)

the bowl were a large copper Pickelaxt-type axe (L 27.1 cm; Fig. 1,12) and a small gold tube (L ca. 6 cm; Fig. 1,13). However, it cannot be stated with certainty that these objects belong to the contents of the bowl, since this section of the bowl represents its most damaged part that was also pushed inwards, giving the impression that the axe had been placed outside the bowl. In case the axe was indeed part of the set of objects found inside the bowl, it must have belonged to the group placed atop the bowl, which includes the dentalium shells and the small gilded vessels. The axe likely had a wooden handle with gold plating, parts of which were the afore-mentioned gold tube as well as the shorter tube found above the stone adze (Fig. 1,14).

Interpretation of the large bowl and its decoration

Simple shallow bowls without handles represent a practical type of tableware that is frequently encountered in forms manufactured in medium or low quality within various Neolithic and Eneolithic cultures of the Eastern Balkans. However, the high-quality examples of large size and with prominent ornamentation on the inner surface of the vessels are not as common. On the western coast of the Black sea, in addition to Varna, vessels of similar shape and decorative style were found only in the tell-settlement and the necropolis of Kozareva Mogila near Burgas. One of the pots from this settlement has almost the same dimensions as the bowl from Grave 4, whereas the other specimens are of somewhat different shape and dimensions and are more similar to the bowl found in Grave 2 at Varna.¹² The largest number of this type of vessel is known from areas in the central part of the Eastern Balkans, in the culture of Bubanj–Salcuța–Krivodol (Bubanj Ia–Salcuța II). These are pots in groups I and II following the classification by Petya Georgieva, which were documented in the settlements of Salcuța, Djakovo, Devetaška, Krivodol, Junacite, and Teliš.¹³ To a much lesser degree such vessels are also present in the late phase of the Karanovo VI culture (Karanovo, Mečkur).¹⁴ All of these specimens, including the bowl from Grave 2 in

¹² Georgieva et al. 2018, Fig. 10.4,7; 10.9 C,3.

¹³ Георгиева 2012, 38, Фиг. 4; 103, Фиг. 9; Ганецовски 2007, 118, Обр. 33, 34, 36.

¹⁴ Petrova 2004, 425 ff. Fig. 3,6; 4,11.

Varna,¹⁵ were decorated using the technique of graphite treating, or by applying paste colours.

The method of polishing and coating was applied also on the large bowl from Grave 4 in Varna, but the difference here is that gold powder was used instead of graphite.¹⁶ Decorating pottery with gold is an unprecedented luxury, so it is not surprising that the specimens with this ornamentation are a complete exception in the ceramic inventories of prehistoric cultures. This rare and luxurious technique is exclusively related to the Late Eneolithic of the Eastern Balkans which, thanks mainly to the findings from the Varna necropolis, could also be called the “first golden age” of Europe.¹⁷ Apart from the bowl from Varna, only four more ceramic finds with gold ornaments are known, and these are the four potsherds in the settlements of the Bubanj–Salcuța–Krivodol culture (two from the site of Humska Čuka, one from the site of Bubanj, and one from the site of Krivodol).¹⁸ Although they belong to vessels of different types, they undoubtedly provide another important indication that connects the necropolis in Varna with this culture from the interior of the Balkans.

Until now the decorative motifs on the large bowl from Grave 4 have been considered primarily in a general sense and placed in the category of geometric ornaments.¹⁹ Their first comprehensive analysis was carried out by the Bulgarian conservator and researcher Todor Uzunov in 2019, who emphasised the highly sophisticated concept of the depicted motifs. In the alternating T-bands, Uzunov sees a kind of swastika that points to the principle of cyclicity and the circular movement of nature. In the composition represented on the “slices” he recognises four sailing ships sailing in a circle.²⁰

The four bands-motif, or two “T-letters” one opposite the other, creating the specific fourfold division of the surface with an empty square in the centre, represents the main structural element of the decoration on

¹⁵ Иванов 1975, Табл. XXII.

¹⁶ The opinions on the technology of applying gold on the vessels from Grave 4 in Varna differ. See Ivanov, 1991, 135; Todorova & Vajsov 2001, 97; Uzunov 2019, 2–3 and footnote 4.

¹⁷ For the current periodisation of the Eneolithic, i.e. the Copper Age, in the territory of the Central and Eastern Balkans, see Todorova 1995, 85 ff; Govedarica 2016, 13–15.

¹⁸ Bulatović 2020, 42; Stojić & Jocić 2006, 255, Fig. 41a–b; Popova & Kostov 2017, 412.

¹⁹ See Popova & Kostov 2017, 410 and the references therein.

²⁰ Uzunov 2019, 1 ff.

almost all of the vessels of this type. If we accept Uzunov's rather convincing interpretation, according to which the shapes in the four slices represent ships, then the composition as a whole does indeed give the impression of an organised circular movement. In fact, one gets the impression of dynamic fluidity and interweaving of the entire decorated surface, in which not one ornament is in its full shape, nor is it fully defined.

All the motifs and representations are adjoining from the outside in a strictly determined order, forming the circular zone in the middle of a larger area, in the centre of which are the gilded square and the small concave base of the vessel. Those two elements, despite the lack of ornamentation, or precisely because of its absence, stand out as a kind of peaceful oasis amidst this otherwise rather dispersed and dynamic composition. Together with the rim modelled as a string of pearls, they create a distinct space in the entire ornamental composition of the vessel. However, whereas the decoration of the rim represents a separate component, one that only frames and brings to the fore a vivid openness of the ornamental composition, the golden square and the small base of the pot form a kind of omphalos, that is, the focus of events around which the entire performance revolves and unfolds. This kind of square, with a small circle in the centre or a small base, is present on most vessels of this type, and each of them could represent a local central place, that is, an autocentric "navel of the world". In addition, the decorative bands on the vessels from Devetaška and Krivodol bear wavy and zigzag lines representing water courses, probably rivers.²¹

Taking into account Uzunov's assertion that the horizontal "J-letters" with the sail-shaped ornaments on the vessel from Grave 4 depict large sailing ships, the golden zigzag bands placed underneath them, which very effectively give the impression of perspective would, in consequence, have to represent a vast body of water – in this case the sea. Concerning the central square with the omphalos, it does not take much imagination to identify this "navel of the world" here as the settlement in Varna, or some other nearby settlement where the deceased to whom this grave is dedicated lived and governed. Overall, the large bowl and its black-and-gold decoration symbolise the general well-being and the power to rule over the expanse of sea and land, in the centre of which lies

²¹ Георгиева 2012, Таб. 6,1; 30,2.

Varna.²² The grave goods placed in the bowl, such as the small gilded pot, the anthropomorphic idol, copper tools and weapons, dentalium shells, and so on, only amplify the inferred symbolism.

Conclusion

The study of the symbolism of the large bowl and its contents is not only significant for the research questions related to Grave 4, in which these objects were placed, but also opens up the possibility to consider some wider social and economic aspects of the community that used the necropolis in Varna. This is especially evident in the comparison of the “royal” graves in the core of the cemetery. Beside Grave 4, which as shown here has all the characteristics of a “royal” cenotaph, there are most certainly at least two other graves in this necropolis that are of the same rank. These are the cenotaph Grave 36 and the skeletal burial Grave 43.²³ Graves 4 and 43 display the most similarities in the dimensions and orientation of the burial, and in the arrangement of the grave goods.²⁴ On the whole it can be concluded that the same ceremony was performed in both cases, whereby, according to the dimensions of the pit and the arrangement of the goods, the burial ritual performed at the symbolic Grave 4 entirely emulated a real funeral, that is, it simulated the presence of the deceased. In the case of the symbolic Grave 36, the dimensions of the burial pit could not be determined with certainty, which to some extent makes its comparison with the other two graves difficult. Nonetheless, the composition and distribution of the grave goods here also indicate the same kind of ceremony.²⁵ It can thus be concluded that of the three graves of rulers, one grave is associated with the deceased who died naturally or was killed in a conflict. Either way, this happened in circumstances that allowed burial in the homeland. In contrast, the other two deceased individuals could only receive a symbolic burial.

²² For prehistoric sailing vessels in the Black Sea area, see Frey 1991, 195 ff; Höckmann 2016, 45 ff.

²³ Grave 1 was also described as a cenotaph, but this grave is not considered here due to the unreliable documentation of the finds. See footnote 5.

²⁴ See Hansen 2020, 45 ff.

²⁵ See Marazov 1991, 151 ff; Slavchev 2010, 193 ff.

There is a clear chronological difference among the three graves, which is not unexpected, as it is hard to imagine that three rulers could govern a single community at the same time. According to the radiocarbon date (4550–4330 cal. BC),²⁶ Grave 43 should belong to the early burials within this cemetery. This is in agreement with the typological characteristics of the grave goods, principally the copper axes, which represent the classic variant of the Pločnik-type hammer-axe.²⁷ Grave 4 is certainly the latest of the three. The Pickelaxt axe type²⁸ and, as discussed above, the large bowl itself are attributed to phase III of the Karanovo VI culture and the late culture Bubanj–Salcuța–Krivodol.²⁹ These typologically youngest elements are crucial for assigning this grave to the final phase of burial activity in the necropolis of Varna I.³⁰ On the other hand, the Vidra-type copper axe and the absence of typologically younger elements suggest that Grave 36 could date from a somewhat earlier time, certainly the period preceding Grave 4.

The question remains as to what happened with the deceased individuals to whom the symbolic graves 4 and 36 are dedicated. Why could they not be buried under normal circumstances?

It is hard to imagine that they died due to natural causes and in their own environment. It is even more difficult to imagine that such important individuals, even if they had lost their lives in heavy battles in some foreign land, would have been left on the battlefield, that is, that their remains were not returned home and properly buried. Leaving a dead ruler at the mercy of the enemy could not happen in such a potent community as Eneolithic Varna indeed was, because that would have been a disgrace for the entire society. The only remaining possibility is that these rulers, each in his own time, drowned during some shipwreck or conflict at sea. The representations of the ships on the large bowl from Grave 4 indicate that such events may have taken place, suggesting that the inhabitants of Varna were not only metallurgists and salt producers, but also used the sea as a resource and a way of communication.

²⁶ Higham et al. 2018, 6. This is a radiocarbon date on human bones without calibration to account for the reservoir effect.

²⁷ Govedarica 2001, 157.

²⁸ Todorova 1981, 120.

²⁹ Petrova 2004, 425–427; Георгиева 2012, 40, 93.

³⁰ Todorova & Vajsov 2001, 106; Krauß et al. 2018, 295.

The connection between the deceased, to whom these cenotaphs were dedicated, and the sea is also evident in the large number of dentalium shells present in the graves, all of which are unworked specimens that thus could not be used as jewellery. The fact that dentalium shells are absent in the “royal” skeletal Grave 43, while they are abundant in graves 4 and 36, also highlights their special role in these symbolic burials. The concentration of 1400 of these shells in a pile in the large bowl from Grave 4 (Fig. 1,5) supports the assumption that they served as some kind of payment. In this case, it was supposed to appease the powerful sea spirits, who dragged these high-ranking individuals into the dark depths of the sea.

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Vassil Nikolov*

National Institute and Museum of Archaeology of BAS
Sofia, Bulgaria

Provadia-Solnitsata: symbols from the prehistoric past

Abstract: The prehistoric complex of Provadia-Solnitsata is a landmark site of the earliest European civilisation. It displays the remains of the earliest salt-production centre in Europe (5600–4350 BC), which emerged as the first prehistoric urban centre on the continent (4700–4350 BC). It is located near the town of Provadia in north-eastern Bulgaria, and was established and inhabited by the earliest table salt producers in Europe. The site consists of a salt-production centre with ritual pits, an unfortified and later a stone-walled settlement, a ritual field, and cemeteries. It occupies an area of about 30 hectares.

Both field and office interdisciplinary research of Provadia-Solnitsata has allowed the extraction of a considerable body of generalising information about the period from the beginning of the Late Neolithic to the end of the Chalcolithic in the area along the lower course of the Provadia river and Varna lakes. Part of this information has been published either in greater detail or more concisely, however small objects or smaller features usually remain in the background. Therefore, in this short article dedicated to the memory of my colleague and friend, Academician Nikola Tasić, I would like to draw attention to several specific phenomena that represent vivid vestiges of the prehistoric past.

Key words: salt-production centre, Late Chalcolithic, anthropozoomorphic image, gold objects, mass graves

The prehistoric complex of Provadia-Solnitsata is a landmark site of the earliest European civilisation. It displays the remains of the earliest salt-production centre in Europe (5600–4350 BC), which emerged as the first prehistoric urban centre on the continent (4700–4350 BC). It is located near the town of Provadia in north-eastern Bulgaria, and was

* vassil.nikolov@abv.bg



Figure 1.

established and inhabited by the earliest producers of table salt in Europe. The site consists of a salt-production centre with ritual pits, an unfortified and later a stone-walled settlement (Fig. 1), a ritual field, and cemeteries. It occupies an area of about 30 hectares.¹

The emergence and development of the Provadia-Solnitsata complex is directly related to the single rock-salt deposit in the Eastern Balkans on which it is located. Almost throughout the entire later prehistory, salt producers held the monopoly of the “white gold” over a vast region from the Carpathians to the Aegean sea, and from the Black sea to the Central Balkans. Cooking salt became a strategic raw material – the driving force of economic and social development. It also acquired the meaning of commodity money, which is why Provadia-Solnitsata performed the functions of the first-ever “mint” in prehistoric Europe.

Archaeological research of the prehistoric salt-production and urban centre Provadia-Solnitsata began in 2005, and has been ongoing for nineteen seasons. It is carried out by a large interdisciplinary team of archaeologists from the National Archaeological Institute with Museum of the Bulgarian Academy of Sciences, and from the Provadia Museum of History.

¹ Nikolov 2016a; Nikolov 2016b; Николов, Люнчева, Самичкова 2021; Nikolov 2022.

So far, it has been found that the prehistoric salt-production and urban centre consisted of a central settlement, fortified in the Chalcolithic with massive stone walls, which was inhabited for more than 1200 years; a salt-production complex for boiling brine (saline spring water) from the Middle and Late Chalcolithic; ritual features on its grounds; a ritual pit field from the Late Neolithic; cemeteries from the Middle and Late Chalcolithic; a pit sanctuary from the Late Chalcolithic; and a salt-production facility from the Late Chalcolithic. Other features are likely to be uncovered as well. The complex also includes a cemetery from the Early Bronze Age, a Scythian tomb (fifth century BC), a residence of a Thracian ruler from the second and first centuries BC, and a large Thracian burial mound accumulated during the centuries that followed.

Both field and office interdisciplinary research of Provadia-Solnitsata has allowed for the extraction of a considerable body of generalising information about the period from the beginning of the Late Neolithic to the end of the Chalcolithic in the area along the lower course of the Provadia river and Varna lakes. Part of this information has been published either in greater detail or more concisely, however small objects or smaller structures usually remain in the background. Therefore, in this short article dedicated to the memory of my colleague and friend, Academician Nikola Tasić, I would like to draw attention to several specific phenomena that represent vivid vestiges of the prehistoric past.

A recently uncovered anthropozoomorphic facial image (Fig. 2), made of finely purified clay, dates from the Late Chalcolithic (4600–4350 BC). It is three-sided in shape, very much like a slightly elongated, inverted triangle with its upper angles extended sideways, and with a bulging (convex) upper line. The lowest sharp part of the face (muzzle) is slightly damaged (chipped). The image is 8.1 cm (the original one was about 8.5 cm) in height, 7.3 cm in width, and is 3.5 cm thick. In general, the surface of the object is in the brown colour range – the front is lighter, and the back is darker.

The front side on which the face is depicted is prominently protruding. It is



Figure 2.

modelled by three slightly bulging triangular zones: two symmetrical ones shape the face, the third one above them represents the frontal region of the head. In a slightly raised part between them incised lines form edges, which depict the nose and eyebrows. The nose passes through the entire face, and the eyebrows connected with it are slightly arched. Under the eyebrows, incised lines outline elongated elliptical eyes, from which three parallel lines are added downwards, and a fourth one flanks the outer part of each eye. The middle of the three strips thus formed is left unsmoothed, and the two marginal ones are smoothed and polished. The nose and narrow strips between the eyes and eyebrows are not smoothed either, and the eye ellipses are polished (the right one is darker, perhaps due to applying paint). The polishing of some zones has resulted in certain colour nuances versus the rest of the face surface, which boosts the impact of the image. Perhaps the colour difference between the two eyes is not accidental either. The frontal region of the head displayed in the anthropozoomorphic image is left rough or has been deliberately rusticated, and is outlined at the front above the face with an angular incised line.

The back of the object is markedly concave, with thin, finely shaped edges along the three sides. The surface is roughly smoothed. There is no reason to think that the object served as a lid.

In the two lateral extensions at the top of the image, one transverse hole (approx. 1.5 mm in diameter) in each extension was probably made from the back to the front. It could be assumed that a "pin" (e. g. a bone one) could pass through these two holes for fastening to a vertical plane, however I do not think that this was their actual purpose. Externally to these two holes, but from top to bottom, another hole has been drilled, a narrower one, through which a thread for hanging the object could pass. This assumption seems rational.

I define the image as anthropozoomorphic. Zoomorphic signs prevail: the overall shape of the head (as in a bovine), the absence of a mouth with the option of a muzzle (bovine), extensions at the top that suggest horns (bull), the crown between the horns which reminds of the upper part of a bovine head (bull), elliptical eyes (bovine). I tend to accept the zoomorphic features in the image as features of a bovine animal and specifically of a bull. The anthropomorphic signs in the image are the nose and eyebrows – bovines do not have such features, but still they were depicted in anthropomorphic figures of that time. A good example could be

the vessel from the tell of Radingrad, Razgrad region, north-eastern Bulgaria.

Finally, here is one more point about the purpose of the holes in the upper side extensions of the figure. While the vertical ones most likely served to hang the head, the horizontal ones might have served to attach something temporarily, for example a blossom, when using the image during a rite (feast).

Salt is gold! The act of equalising the two came at a later time and emphasised the importance of salt for the existence of man. Without a minimum amount of table salt needed by his body, man would not be able to function. But salt was also the first means of payment! On the other hand, gold and copper were the first extracted and processed metals, but they, and especially gold, were mere symbols of prestige and status, as they marked people from the top of the social hierarchy. In the prehistoric society during the fifth millennium BC, salt and gold were the markers of the real economy and the economy of affluence.

The paths of gold and salt crossed about 6600 years ago in Europe's earliest salt-production and urban centre, Provadia-Solnitsata. Here the large-scale production and trade in salt led to the construction of a complex, well-organised structure of society headed by an elite who both governed the centre and was responsible for its proper operation. Representatives of this group had the right to possess the most valuable sign of social eminence: objects of gold, as tokens of their standing in society.

So far, three gold objects have been found at Provadia-Solnitsata (Fig. 3). They are made of 23.9 karat native gold, and were shaped by casting, forging, and drawing. The first object is a pendant with a hemispherical head and an elongated bent pin, with a rectangular section. It weighs 1.89 g. It was found on the grounds of the Late Chalcolithic cemetery where it belonged as an attribute of a commemorative rite. The second golden object is an appliqué which is severely deformed. It has an irregular round shape and a convex section, displaying a pair of holes in the periphery. It weighs 0.66 g. This Late Chalcolithic object was found in the cultural layer of the tell behind the second defensive stone wall. The third Late Chalcolithic gold object is an earring (ring). Its circle is open, with slightly thinned ends. It is made of wire with an irregular circular cross-section. It weighs 1.18 g. It was found in a cluster of materials over the remains of the second defensive stone wall.



Figure 3.

Although small in size, these gold artefacts are made of probably the rarest raw material mined by the man of the Eastern Balkans. This testifies to trade links that reached out far beyond the region. The radiance of these three items illuminates the past glory of Solnitsata.

Several archaeological seasons ago, on the southern side of the tell, a new type of salt-production facility was investigated which used the sun's heat to boil the brine (saline water). It was in operation at the end of the Late Chalcolithic and provides evidence about the onset of a drier climate, and a rise in the average annual temperatures. At the bottom of one of its constituent features, provisionally called "basin", after it was already out of its original use, a grave with a four-side shape was dug, in which seven corpses were laid (Fig. 4).

The results from both field research and the specialised study of the skeletal remains, as well as the ancient vegetation and the objects found in the grave, have aroused curiosity, and sparked many internal discussions on how the individuals laid in the grave had been killed.

Three of the deceased persons were placed in a contracted position to the right or left; two others were laid on their stomachs, with their legs strongly flexed at the knees and pressed to the chest, and one individual was found in a "sitting" position, with knees flexed to the chest and legs stepping on the bottom of the pit. The person laid last was on his back, with his head, body, and legs intertwined with the skeletal remains of the others. Large stones had been thrown at his skull, and some at his pelvis.

A copper axe was found in the grave with a hole for a handle in which remains of wood have survived, as well as a large horn blade with

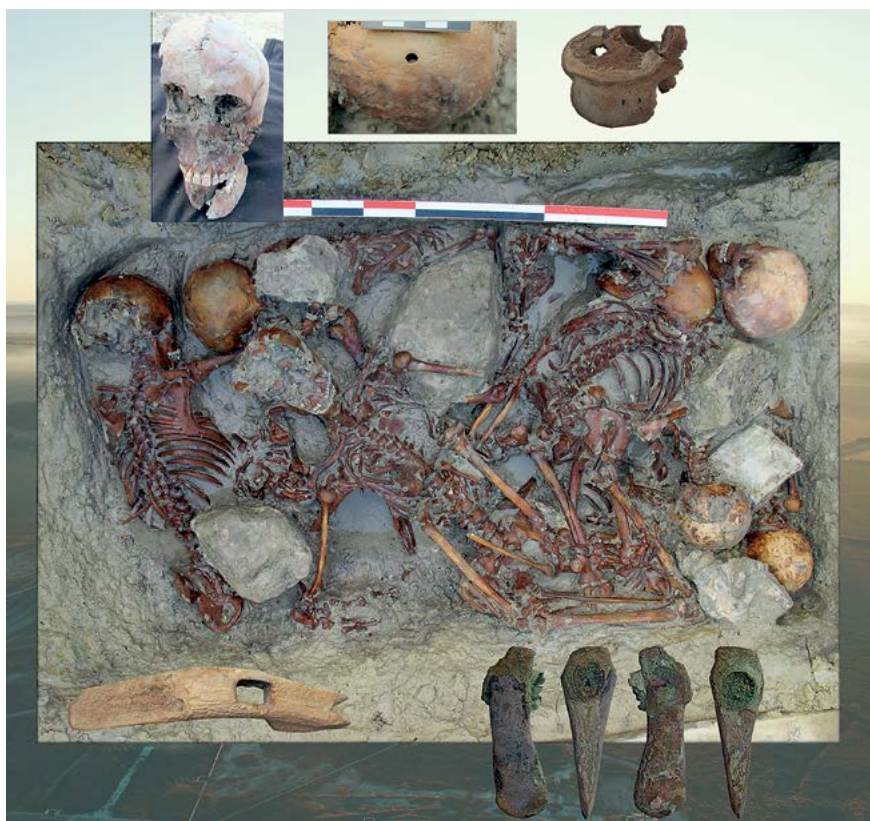


Figure 4.

a hole for a handle. It is possible that these two tools had caused the death of some of the buried individuals.

As the skeletal remains were discovered, it was found that the first person – a man of about 23 years of age – was killed most cruelly. He was “glued” tightly to the eastern wall of the pit in a contracted position to the right. At the bottom of the spine two adjacent vertebrae display traces of a blow with a circular blade, most probably a copper one. This was a lethal injury. It penetrated vital abdominal organs and the spine. The back left occipital part of his skull was punctured with a hole with a diameter of 6 mm, but clearly it was not done in the last moments of his life. The right side of the head shows traces of a very strong blow, probably with a large stone. A horn tool was laid in front of the dead man’s chest. For the other six persons, there is no direct evidence of how they died.

Field observations have also been confirmed by the anthropological analysis of bone remains. In addition, it has turned out that almost all deceased individuals were adolescents or young adults, from 12 to 18 years of age. The oldest one was a woman, 25–35 years old. The results regarding the health status of the individuals are quite curious – five of them suffered from anaemia in childhood; two had cavities which developed into dental abscesses; three had abrasion of the front teeth from behind; one suffered a leg fracture; and another one had a fracture of a foot bone.

The results of samples taken from the grave for pollen analysis have aroused interest as well. A relatively large amount of pollen has been found from a wayfaring tree (*Viburnum lantana*) – a total of 34 pollen grains. This high concentration of pollen from a plant that has a relatively low productivity (due to exclusive insect pollination), and large attractive blossoms, is most likely due to the fact that the blossoms were intentionally laid in the grave. Besides, the blossoming period of the wayfaring tree – between April and June – gives us clues about the time of year when the burial took place.

The cause of the simultaneous deaths of these seven young men and women was clearly related to conflicts internal to the settlement, and prompted by confrontation over the final possibility for getting hold of cooking salt from the saline springs, which had started to disappear in the wake of climate change.

This mass grave corresponds to another mass grave, investigated in the cemetery of the settlement from the end of the Chalcolithic, which has six skeletons registered in it – two of children, one of a young person, and three of adults (Fig. 5). It was found in a round pit with a diameter of about 1.60 m. The primary treatment of the bones revealed that two of the adult individuals were men aged about 25–35 and 35–45 years, respectively, and the third one was a woman aged 25–35 years. The fourth skeleton belonged to a young man about 17 years old. The children were probably about 3–4 and 5 years old, respectively. The dead were laid in a flexed position, expressed only in bending of the legs for most of the cases, with one of the dead persons thrown face down. One of the skeletons was uncovered about 50–60 cm above the others. Most likely, the body was laid in the burial pit a little later than the rest. On the skeletons of the three younger individuals (the two children and the adolescent), injuries that had caused the deaths were recorded on the skulls. The oldest

man was killed by blows, and then the feet of his two legs were cut off. The other man was killed by a blow to his abdomen dealt with a long stone adze, and the woman under him suffered fractures of the cervical vertebrae, was disabled, and died later.

The reason for this mass murder of a group of people, perhaps relatives, was probably again an internal confrontation in the community of the settlement over the use of brine for salt production from the disappearing saline springs.



Figure 5.

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Aleksandar Kapuran*

Aleksandar Bulatović**

Institute of Archaeology

Belgrade, Serbia

Hilltop Settlements of the Copper, Bronze, and Iron Age in Eastern Serbia

Abstract: In the course of the '60s and '70s of the previous century, Nikola Tasić, member of the Academy, conducted a series of archaeological excavations in the territory of north-eastern Serbia. Thanks to numerous excavations and surveys, a conclusion can be made that the aforementioned territory represented a suitable area for the formation of settlements during the Copper, Bronze, and Iron Ages. Due to the poor quality and fertility of the soil, the Iron Gates region, the Kučaj mountain, and the Timok valley were primarily suitable for the development of stockbreeding, rather than agriculture. It seems as if the basic advantages of the region were its hydrological and mineralogical potentials. On the other hand, by analysing the cultural stratigraphy of settlements that formed on dominant positions (hilltops), one can observe that certain patterns occur repeatedly. The goal of this paper is to provide a better understanding of the motives of late prehistoric populations (from the fourth to the first millennium BC) to form numerous hilltop settlements in the region, through the analyses of spatial distribution and cultural stratigraphy.

Key Words: hilltop settlements, Bubanj–Sălcuța–Krivodol, Coțofeni–Kostolac, Early Iron Age, cultural stratigraphy, spatial analyses

Prologue

During the '60s and '70s of the last century, our esteemed colleague and member of the Academy, Nikola Tasić, conducted a series of archaeological excavations of prehistoric sites in the territory of north-eastern Serbia, some of which are the Zlot (Lazareva) cave, Kulmja Škjobu-

* a.kapuran@gmail.com

** abulatovic3@gmail.com

lui in Klokočevac, Pjatra Kosti in Crnajka, and Čoka Lu Balaš near Krivelj.¹ Those excavations not only shed new light on the genesis of the Bujanj–Sălcuța–Krivodol culture (hereinafter BSK), but also contributed to the better understanding of the Coțofeni and Coțofeni–Kostolac culture (hereinafter C–K) in the territories between the Nišava and the Danube river flows. At the same time, in the Negotin area, colleagues Vojislav Trbuhović from the Institute of Archaeology in Belgrade, and Ljubinka Vuković from the Museum of Krajina, excavated several settlements attributed to the aforementioned cultural groups, further complementing our insight into the settling of north-eastern Serbia during the Copper Age (from the second half of the fifth to the mid-third millennium BC).² Following a pause of several decades in research, the Institute of Archaeology in Belgrade initiated a new series of surveys and excavations of prehistoric settlements, along with the publication of archaeological collections from local museums.³ The newly acquired data on the distribution of Late Eneolithic settlements in the territory of north-eastern Serbia were presented in the paper “Coțofeni–Kostolac culture in the territory of north-eastern Serbia” (*Културна група Коцофени–Костолоац на територији североисточне Србије*), and the international symposium “Communities in Transitions”, held in Athens in 2014.⁴

Chronological framework for late prehistoric cultures in north-eastern Serbia

Besides the epochal discovery of Lepenski Vir, the scientific reputation of the territory of north-eastern Serbia continued through the discovery of the earliest copper mine in Europe in Rudna Glava near Majdanpek by member of the Academy B. Jovanović, dated to the transition between the sixth and the fifth millennium BC.⁵ Due to the continuity in mining heritage, the territory of north-eastern Serbia became an important area for Copper Age communities, especially in the later phases of the Vinča

¹ Tasić 1971; Tasić 1982; Tasić 1995.

² Трбуховић & Вуковић 1967.

³ Булатовић, Капуран & Јањић 2013; Капуран, Булатовић & Јовановић 2014; Капуран & Булатовић 2015.

⁴ Капуран & Булатовић 2012a; Kapuran, Bulatović & Milanović 2018.

⁵ Jovanović 1971; Borić 2009.

culture.⁶ However, it is important to highlight that Vinča culture settlements have not been recorded in the vicinity of exploited mineral deposits, and that the ore was transported west of the Kučaj mountains, where it was processed.⁷ It was only logical that BSK communities, which appear in Serbia following the collapse of the Vinča world,⁸ took a great interest in the exploitation of mineral resources within the so-called “Timok Eruptive Basin”, one of the largest copper mineralisations in the Balkans. Besides copper, gold was exploited in this part of Serbia, mostly through the panning of alluvial deposits of the Pek river and its tributaries, although certain data indicate that deep in the past native gold could have been found even on the surface.⁹

Settlements of the BSK complex have been recorded in almost all regions of Serbia, except for Vojvodina. Those settlements are most numerous in the north-east, as approximately thirty settlements have been recorded in the territories of Majdanpek, Bor, Kladovo, Negotin, Zaječar, and Knjaževac (Map 1).¹⁰ The area of Bor was interesting due to copper deposits, as can be observed through a large number of shaft-hole copper axes in museums of this region.¹¹ During the excavations of the Zlot cave and the site of Čoka Lu Balaš, several pins with a rectangular cross-section, as well as a flat copper chisel (Zlot cave), were recorded.¹² A completely preserved ceramic tuyère from the site of Čoka Lu Balaš, utilised in the smelting process (Figure 2/6), and a potsherd attributed to the BSK culture, with copper slag attached, from the Kmpije site (Figure 2/7), have until recently represented the only finds that could be connected with metallurgical processes.¹³ Apart from these finds, a shaft-hole axe was discovered during the archaeological excavations at the site of Grabar–Svračar in Smedovac.¹⁴ Several years ago, during the excavations of Kozija cave, our colleague Dušan Mihailović recorded certain remains

⁶ Jovanović 1971.

⁷ Šljivar, Kuzmanović-Cvetković & Jacanović 2006; Radivojević et al. 2010.

⁸ Bulatović & Vander Linden 2017; Bulatović et al. 2020.

⁹ Simić 1969.

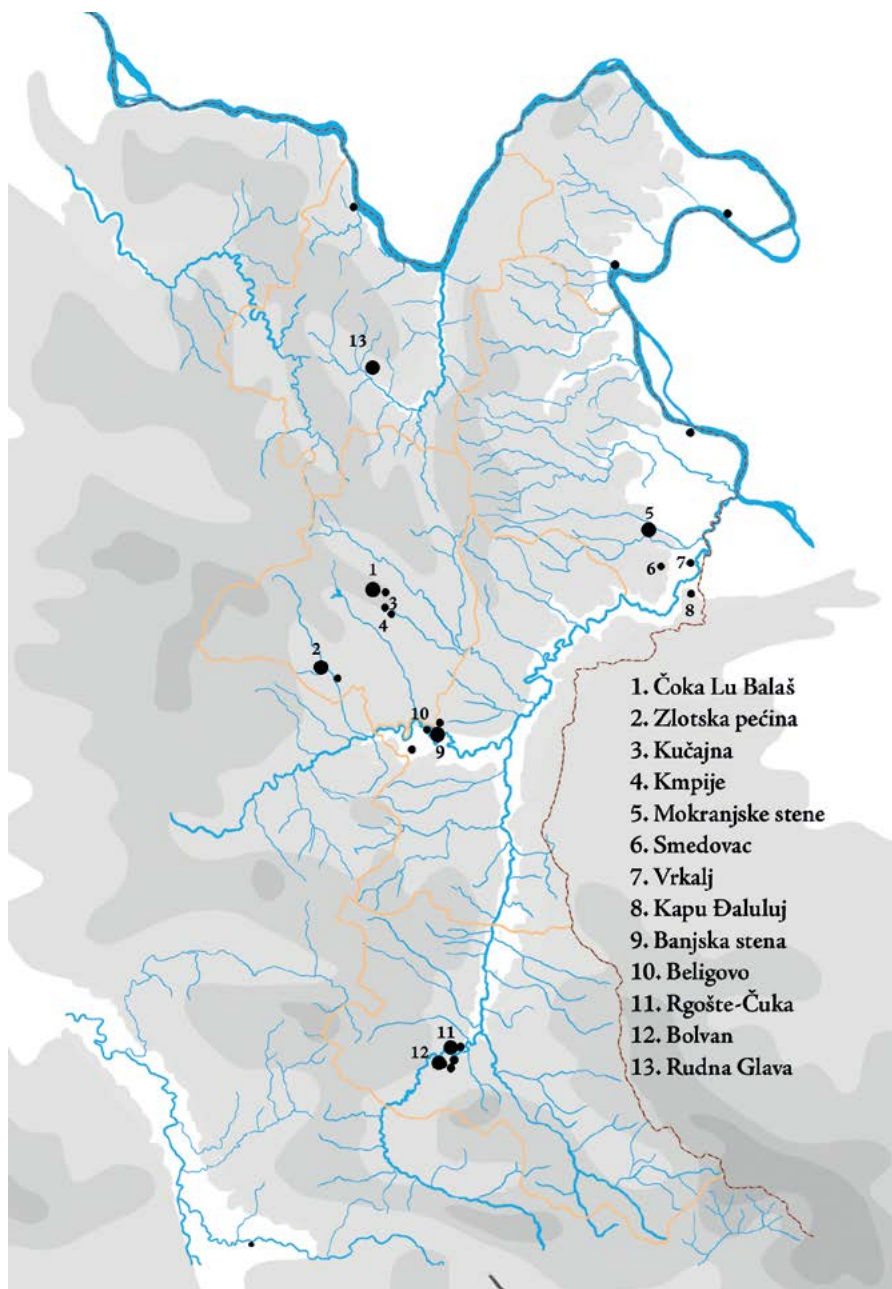
¹⁰ Kapuran 2014, Karta 8.

¹¹ Stanojević 1984–1986.

¹² Tasić 1971; Tasić 1982; Stanojević 1984–1986.

¹³ Kapuran 2019.

¹⁴ Трдоховић & Вуковић 1967.



Map 1.

which indicate copper metallurgy within the layer with finds attributed to the Sălcuța group.¹⁵

The modeling of absolute dates of the BSK complex in Oltenia, Serbia, and north-western Bulgaria position its beginning in 4573–4422 cal. BC (with a probability of 95.4%), or 4530–4465 cal. BC (with a probability of 68.2%), and its end in 3947–3806 cal. BC (with a probability of 95.4%), or 3932–3869 cal. BC (with a probability of 68.2 %).¹⁶

Since a number of sites have been forgotten, without even basic elements for locating them, the team of the Institute of Archaeology in Belgrade, in collaboration with local museums, conducted several revision excavations between 2010 and 2016. The team has located and marked a large number of recently known sites with a GPS device, and at the same time discovered several new sites.¹⁷

According to P. Roman, the Coțofeni culture in Romania is characterised by four types of settlement: settlements on the Danube's islands, settlements on river terraces, settlements on difficult to access mountain terrains, and settlements in caves.¹⁸ Within the Serbian Danube region and its hinterland, the topography of settlements does not differ from such a concept, and it is characterised by a contradiction in terms in the selection of the settlement position. The diversity of settling positions represents a paradoxical connection between the natural environment and cultural influences.¹⁹ Namely, those communities simultaneously inhabit wide river terraces on the banks of the Danube, difficult to access rocky cliffs within canyons of small rivers in the hinterland, small elevated locations on mountain slopes, and caves. Was such diversity conditioned by the complex relief, or a strong need for the control of the entire

¹⁵ During the search for the Paleolithic, certain traces of burning, fragments of ore and copper drops were recorded in the cultural layer of later prehistory. We would like to thank D. Mihailović for giving us insights into finds from that context.

¹⁶ Bulatović & Vander Linden, 2017, 1055.

¹⁷ The revision surveys were conducted by A. Kapuran and A. Bulatović (Kapuran & Булатовић 2012b), with great help from I. Jovanović, the curator of the Museum of Mining and Metallurgy in Bor; B. Ilijić, the curator of the Regional Museum in Knjaževac; and G. Janjić, the curator of the Museum of Krajina in Negotin. We would also like to thank Jana Škundrić, PhD, who included our team in surveys of archaeological sites in the vicinity of Felix Romuliana, which were funded by the Free University in Berlin and the TOPOI project of the German Archaeological Institute.

¹⁸ Roman 1976.

¹⁹ Fletcher 1977.

area, so much that even the most extreme locations were occupied? During the survey, we recorded nine settlements that were located in difficult to access positions, with a slope of the terrain of 45° and cliffs in the hinterland.²⁰ Settlements positioned in such a manner are dominant in relation to the entrances to canyons, or confluences of small creeks and larger rivers. Rocky cliffs, always in the hinterland of sites, are calcareous and usually have a cave in their immediate vicinity. Caves were most likely utilised for livestock keeping. Out of all of the excavated cave sites, only Kapetanova pećina yielded more than a three meter thick cultural layer, with finds attributed exclusively to the C–K culture. So far, this cave represents the only cave that provided the evidence of long-term settling of the bearers of the C–K culture in one place.²¹ The results of the topography analyses of hilltop settlements attributed to the C–K culture indicate that certain settlements were also inhabited during the BSK culture. Such are the sites of Mokranjske Stene–Kamenolom, Mokranjske Stene–Rockshelter, Četaće–Vrkalj, Bolvan, and Banjska Stena (Map 1). The difference lies in the density of settling, which is significantly higher during the C–K culture. Therefore, this paper will address solely the most important multilayered sites, whose cultural stratigraphy was confirmed with archaeological excavations, and therefore can provide new data for understanding the settlement patterns during the Eneolithic and the Bronze Age.

During the second half of the fourth millennium BC, possibly under pressure from populations of the Asian steppes,²² bearers of the Coţofeni–Kostolac culture started their movement from the Iron Gates region to the territory of the Mlava river confluence in the west, the Kučaj mountains, Bor, and Zaječar, and further to the south towards the South Morava basin.²³ According to the absolute dates from the site of Bujanj, the Coţofeni–Kostolac culture – at least in the Central Balkans – started between 3352/3037 cal. BC (with a probability of 95.4%), or 3205–3058

²⁰ Тасић 2004; Капуран & Булатовић 2012a.

²¹ Archaeological excavations of the site were conducted by Tonko Rajkovača, curator of the Museum in Bor. One of the authors, A. Kapuran, had the opportunity to observe a cross-section of one of the trenches, with several phases of habitation, although the archaeological finds were culturally uniform and attributed exclusively to the Coţofeni–Kostolac culture.

²² Boyadzičev 1998.

²³ Капуран & Булатовић 2012a.

cal. BC (with a probability of 68.2%), and ended between 2866/2684 BC, or 2875–2667 cal. BC (with a probability of 95.4%), or 2862–2771 cal. BC (with a probability of 68.2%).²⁴ This modeling was supplemented with more absolute dates, and the new results yielded more precise chronological frames for the beginning and the end of the group. Therefore, the beginning of the group falls between 3207 and 3105 (with a probability of 68.2%), or 3344 and 3097 (with a probability of 95.4%), while the end falls between 2864 and 2806 (with a probability of 68.2%), or 2878 and 2739 (with a probability of 95.4%). According to this model, the duration of the group is estimated to be 255–402 years (with a probability of 68.2%), or 234–587 years (with a probability of 95.4%).²⁵ Presented results of absolute dating show that the Coțofeni–Kostolac culture started to settle NE Serbia during the Early Bronze Age I period.²⁶

It remains unclear why the material culture remains of the Early Bronze Age II and III²⁷ are scarce in this region. It is difficult to understand the discontinuation in the exploitation of copper from the Timok eruptive area during the second half of the third millennium BC. This resulted in the lack of finds, aside from several graves at the sites on the banks of the Danube, such as Šljunkara in Zemun,²⁸ Rospi Ćuprija, Viminacium–Amphitheatre, Vajuga–Pesak,²⁹ and the sites of Ostrikovac–Đula, and Kaluđersko Polje near Priboj,³⁰ both south of the Iron Gates region.

The research of necropoleis with incinerated burials in the vicinity of Bor, at Trnjane, Hajdučka Česma, Kriveljski Kamen–Bunar, Borsko Jezero, and Šoka Lu Patranu, resulted in the first absolute dates from the Bronze Age in this region. All of the acquired results will be published in a single publication.³¹ The first absolute date comes from the copper

²⁴ Bulatović, Gori & Vander Linden 2020.

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Ibid.*

²⁸ Mladenović & Bulatović 2024.

²⁹ Vranić 1991; Тодоровић 1956; Поповић, Vukmanović & Radojčić 1996; Bulatović, Jo-
vičić & Milovanović 2019; Стојић 1989; Дерикоњић 2010.

³⁰ Стојић 1989; Дерикоњић 2010.

³¹ An international project “Bronze Age in Northeastern Serbia – metallurgy, settlements and necropolises” was initiated in 2017. The project represents a collaboration between the Institute of Archaeology in Belgrade and the Austrian Archaeological Institute of the Austrian Academy of Sciences in Vienna. The absolute dates presented in this paper are the result of the project (Gavranović & Kapuran, *forthcoming*).

1	Mokranjske stene -Portkapina	BSK/ Early Eneolithic	MAMS 31467	4875±23	3698-3638	Bulatović, Gori & Vander Linden 2018
2	Mokranjske stene -Portkapina	C-K/Late Eneolithic	MAMS 31469	4444±22	3327-3015	Bulatović at al 2020
3	Mokranjske stene -Portkapina	C-K/Late Eneolithic	MAMS 31468	4441±24	3328-2903	Bulatović at al 2020
4	Ružana	Middle Bronze Age	MAMS 39765	3984±24	1886-1701	Mehofer at al 2021
5	Ružana	Middle Bronze Age	MAMS 38020	3482±24	1886-1698	Mehofer at al 2021
6	Čoka Njica	Middle Bronze Age	DeA 23585	3439±28	1879-1627	Mehofer at al 2021
7	Trnjane	Middle Bronze Age	DeA 19121	3477±27	1886-1698	Kapuran, Gavranović & Mehofer 2020
8	Trnjane	Middle Bronze Age	MAMS 42796	3418±24	1863-1643	Kapuran, Gavranović & Mehofer 2020
9	Trnjane	Middle Bronze Age	DeA 19119	3404±30	1859-1624	Kapuran, Gavranović & Mehofer 2020
10	Medoševac	Late Bronze Age	DeA 34109	2954±50	1380-1010	Kapuran, Gavranović & Jovanović 2022

Table 1.

smelting-related context from the site of Ružana near Bor, and it yielded a value between 1894 and 1732 cal. BC, with a probability of 88.7%.³² Two graves from the Trnjane necropolis discovered back in 1986³³ were dated, as well as several samples from settlement layers next to the necropolis. Together with dates from the site of Čoka Njica, those yielded the span between 1900 and 1600 BC (Table 1).³⁴ Considering that other dates from the analysed necropoleis fall within the span between the twentieth and the seventeenth century BC, it can be concluded that the territory of north-eastern Serbia was becoming densely populated from the beginning of the Middle Bronze Age.³⁵

It is considered that the end of the Bronze Age is caused by the breach of the Channeled pottery cultures from Central Europe and the Carpathian basin, which resulted in the formation of the Gava–Belegiš culture in the Serbian Danube region during the twelfth/eleventh century BC.³⁶ Unfortunately, there are no absolute dates to definitely confirm that the transition between the Bronze and Iron Ages occurred in that period. Within north-eastern Serbia, the presumed transition is well observed on finds from the Zlot cave.³⁷ However, a date has recently been acquired from the Medoševac necropolis near Niš. The date originates from a burial context that contained a set of jewellery characteristic of the Hügelgräber (Tumulus) culture. The date yielded a value of 2954 ± 50 (Table 1), with a span between 1380 and 1010 BC (Cal. 2-sigma). Statistically, the most probable value falls within the thirteenth and twelfth centuries BC (Table 1).³⁸ It seems that these dates could also indicate the end of the Late Bronze Age in the territory of north-eastern Serbia. All available absolute dates from our investigations were presented at Table 1.

³² Kapuran, Živković & Štrbac 2016; Kapuran 2019.

³³ Jovanović & Janković 1987–1990; Jovanović & Janković 1996; Jovanović 1999.

³⁴ Kapuran, Gavranović & Mehofer 2020.

³⁵ Gavranović & Kapuran, *forthcoming*.

³⁶ Tasić 1983.

³⁷ Tasić 1982; Капуран, Булатовић & Јовановић 2014.

³⁸ Kapuran, Gavranović & Jovanović 2022.

The most important multilayered hilltop sites from the Copper, Bronze, and Iron Age in north-eastern Serbia

As highlighted, several dozen settlements attributed to the BSK culture have been recorded in the territories between the Danube region and the Nišava valley (Map 1).³⁹ The distribution of settlements indicates that most of them were connected with basins of the Danube, the Black, the White, and the Great Timok rivers, except for one small group of sites located in the hills surrounding the present-day town of Bor. Due to the fertile soil in the river basins, these settlements were oriented towards agriculture and stockbreeding, therefore having a similar economy as the preceding Neolithic communities. Besides the aforementioned group of sites in the vicinity of Bor, clusters of settlements that are connected either visually or spatially have been detected in the vicinity of Banjska Steina (Zaječar). One of those clusters lies upstream of the Timok and Danube confluence, and another cluster surrounds a small basin of the Svrljiški Timok, approximately five kilometers west of present-day Knjaževac.⁴⁰ In this paper, we will focus on those sites that display a longer continuity of settling.

The site of Čoka Lu Balaš represents the best example of a multilayered hilltop settlement from the cluster in the vicinity of present-day Bor.⁴¹ The excavations at the site were directed by N. Tasić, together with I. Janković and Z. Stanojević, from the former National Museum in Bor. The excavations were realised in 1971 and 1972, within the project “Early Metallurgy in the Timok Eruptive Area” (*Rana metalurgija u Timočkom eruptivnom basenu*), conducted by the National Museum in Bor, the Institute for Balkan Studies of the Serbian Academy of Sciences and Arts, and the Institute of Archaeology. The settlement was erected at ellipsoid elevations above a meander of the Krivelj creek, surrounded by steep slopes from three sides, and with several nearby sources of water (Fig. 1). N. Tasić mentions the existence of a drywall made of crushed stone on the south-eastern side of the site, possibly representing a defensive struc-

³⁹ Kapuran 2014, Karta 8.

⁴⁰ *Ibid.*

⁴¹ Although the Zlot cave represents the richest site in terms of finds, N. Tasić states that its stratigraphy is disturbed by decades of digging of the cave entry. Therefore, solely deeper portions of the cave have the original stratigraphy, exclusively from the Iron Age.

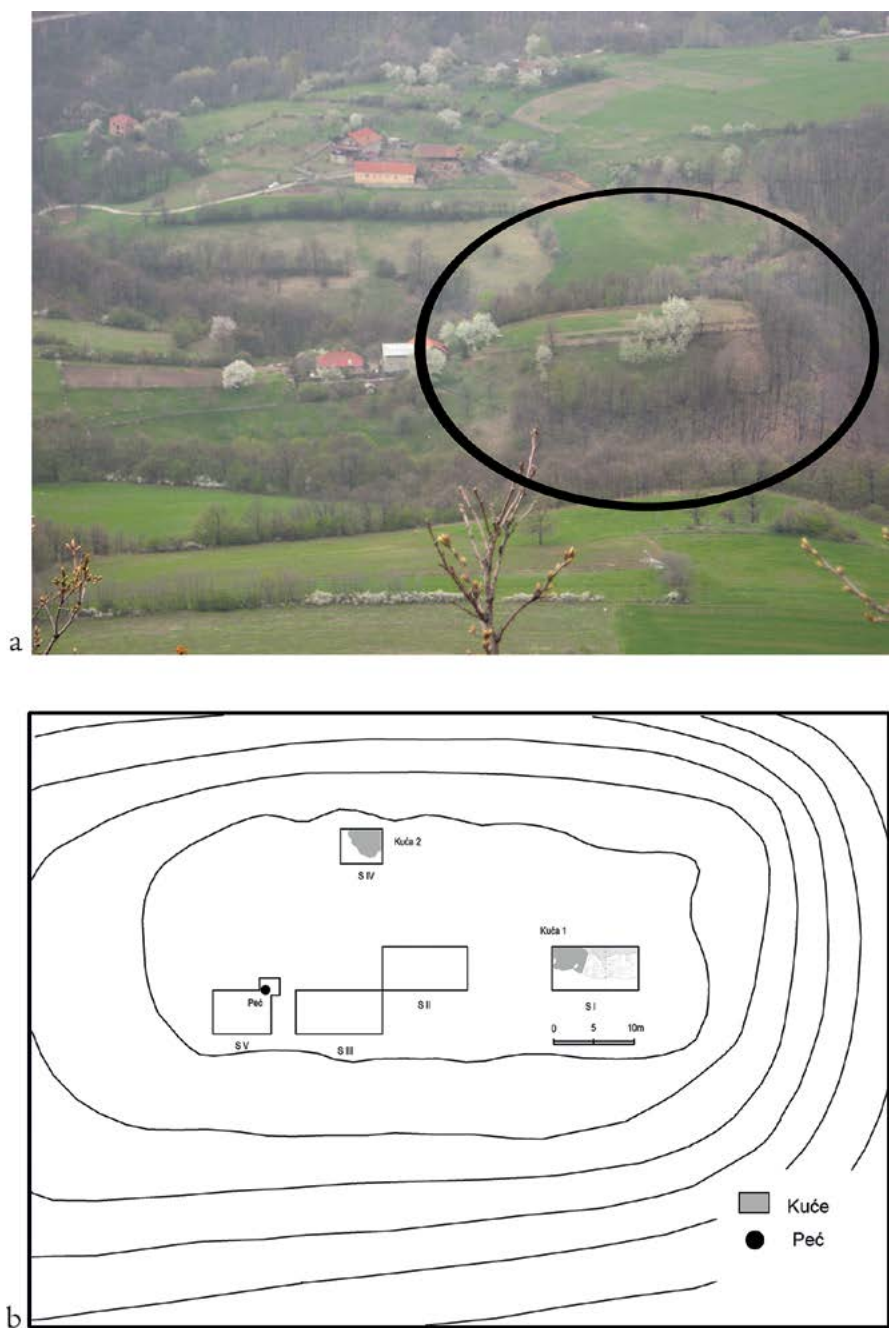


Figure 1: a) Čoka lu Balaš foto; b) situation from 1972.

ture.⁴² The field documentation from 1972 mentions house floors partially leaning to the rock base within the BSK layer. A kiln with six renewal phases was recorded in Trench 5. N. Tasić further mentions that the houses were built in the wattle and daub technique, and that large fire-dogs were found *in situ* on one of the floors. Unlike Zlot cave, the site of Čoka Lu Balaš did not yield finds of graphite-painted pottery or *scheibenhäkel* handles, while the remaining ceramic inventory does not differ from the concurrent sites from the Nišava valley. Interestingly, the BSK layer at the site of Čoka Lu Balaš is rich in finds of completely preserved vessels (Figure 2/1–4).⁴³ Besides being located in the centre of the Bor ore district, the find of a tuyère (Figure 2/6) further indicates possible connections with copper metallurgy at the site.

Following the demise of the BSK complex, the site of Čoka Lu Balaš was settled by the bearers of the C–K culture (Figure 2/5).⁴⁴ In the field diary, N. Tasić notes that this cultural layer was destroyed by agricultural activities and erosion, and thus concludes that the settlement was most likely a seasonal one.⁴⁵ It remains unclear whether the settlement was seasonal during the Late Copper Age, and if the architecture was adapted to short-term habitation. The youngest horizon of settling is based on the scarce finds of potsherds attributed to the Late La Tène period. The pottery from the youngest horizon is analogous with necropoleis near Kladovo in the Iron Gates region.⁴⁶ It should be stressed that a necropolis with incinerated burials, attributed to the beginning of the Middle Bronze Age – Kriveljski Kamen–Bunar – was discovered approximately 200 meters east of the site back in 2012.⁴⁷ At the moment, it remains unclear why the site was not an attractive settling location for the Middle Bronze Age communities.

⁴² Tasić 1982; Тасић 2004.

⁴³ Tasić 1982.

⁴⁴ Tasić 1982; Тасић 2004.

⁴⁵ We would like to thank senior curator I. Jovanović for providing us with the insight into the documentation of the Museum of Mining and Metallurgy in Bor. The plan of the site has been digitised and published for the first time. It should be noted that the documentation is not completely preserved, with missing drawings connected with the diary, and not a single photo from the excavations.

⁴⁶ Капуран, Булатовић & Јовановић, 2014; Поповић 2001.

⁴⁷ Капуран, Миладиновић-Радмиловић & Јовановић 2013.

Besides the site of Čoka Lu Balaš, the settling continuity between the Copper and Bronze Ages has been observed at the site of Kmpije (Figure 2/7–9) and Kučajna, both the suburbs of present-day Bor, as well as within the Zlot cave.⁴⁸ A potsherd attributed to the BSK culture, with copper slag attached, was recorded at the site of Kmpije, indicating copper metallurgy at the site (Figure 2/7). It is important to stress that the aforementioned sites are archaeologically excavated. The issue with the interpretation of those sites lies in the fact that they are covered by modern settlements, and prone to erosion, which resulted in secondary deposits of finds from various periods, as emphasised at the site of Kučajna.

The group of BSK culture settlements concentrated upstream of the Timok and Danube confluence is particularly important for several reasons. Mokranjske Stene–Kamenolom, Mokranjske Stene–Rockshelter, Vrkalj–Ćetaće in Kovilovo, and Grabar–Svračar, all represent sites with an almost identical cultural stratigraphy represented by the BSK culture, the C–K culture, Early and Late Iron Age and, further, some of the sites possess mutual visual contact (Map 1).⁴⁹ Sites within the aforementioned group are located on dominant elevations, while the sites from the second group of settlements – Tamnič–Železnička stanica, Ideče, and Prahovo – are located on river terraces above the Danube and Timok rivers.⁵⁰ All of the sites except Mokranjske Stene–Rockshelter have been excavated more than half a century ago, and we were unable to gain insight into the field documentation. Therefore, we are in a position to solely trust the claims of previous researchers, despite their argumentation. This particularly refers to the BSK settlement at the site of Vrkalj–Ćetaće in Kovilovo, for which V. Trbuhović and Lj. Vuković claim that the houses were organised around a central square, without supporting arguments and documentation.⁵¹

Between 2011 and 2013, in order to determine the cultural stratigraphy, the Institute of Archaeology and the Museum of Krajina in Negotin conducted systematic archaeological excavations at the site of Mokranjske Stene–Rockshelter, located approximately 0.3 km from the site of Mokranjske Stene–Kamenolom, within the canyon of the Sikolska river

⁴⁸ Stanojević 1988; Јовановић 2013; Капуран, Булатовић & Јовановић, 2014.

⁴⁹ Трбуховић & Вуковић 1967; Јanković & Јanković 1976; Капуран & Булатовић 2014.

⁵⁰ Јanković & Јanković 1973; Јanković & Јanković 1975; Капуран 2014.

⁵¹ Трбуховић & Вуковић 1967.



Figure 2: 1-4, 6. Čoka lu Balaš BSK; 7-8. Kmpije BSK; 9. Kmpije C-K.

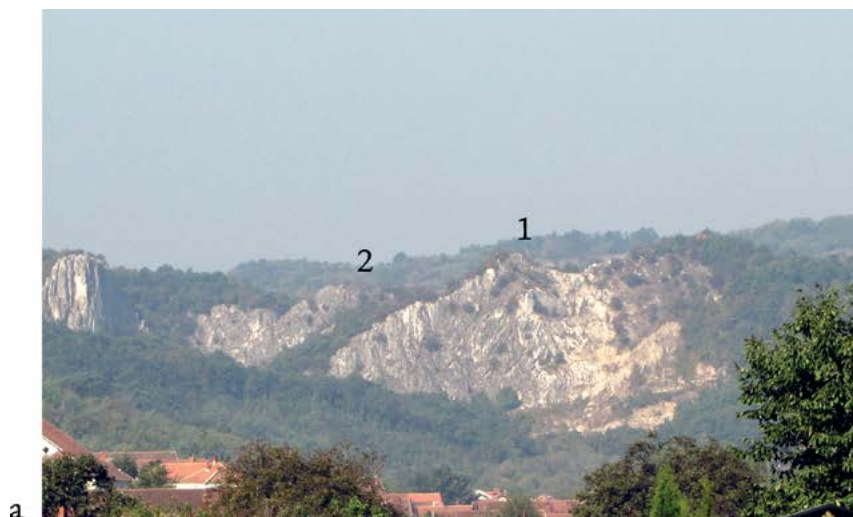


Figure 3: a) 1. Mokranjske stene – Kamenolom; a) 2 Mokranjske stene Rockshelter site. b) Mokranjske stene – Rockshelter site.

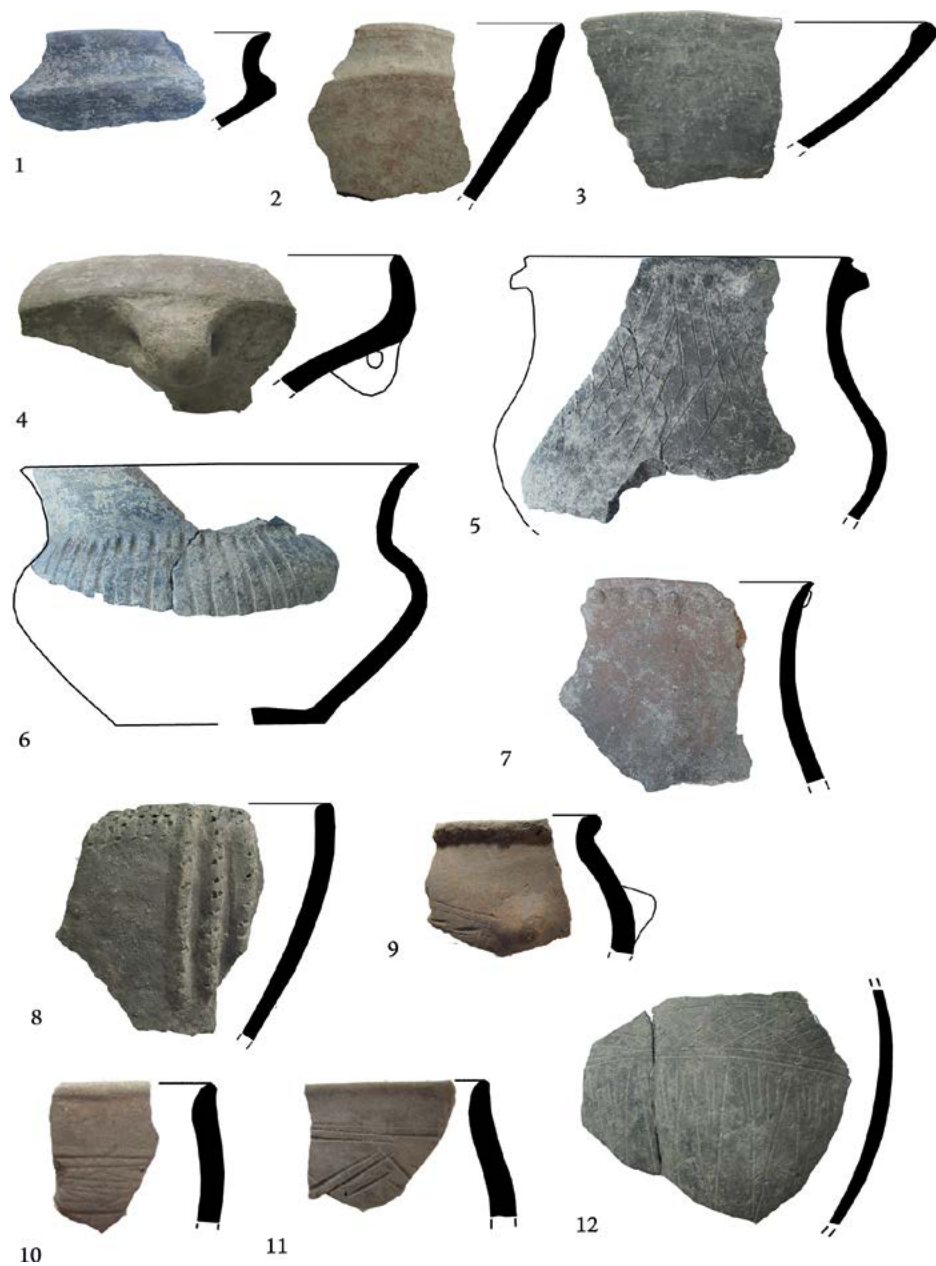


Figure 4: Mokranjske stene-Rockshelter 1-4 BSK, 5-8 C-K, 9-12 Middle Bronze Age pottery.

(Figure 3a).⁵² The site represents a unique feature with the neighbouring elevation and site of Mokranjske Stene–Kamenolom, which was fortified during Antiquity and the Early Mediaeval period.⁵³ Since the most dominant point at the site of Mokranjske Stene–Rockshelter was likewise fortified during Antiquity and the Middle Ages, the excavations were conducted *intra muros*, under a rock shelter that was not disturbed in Antiquity (Figure 3b). The stratigraphy, represented by a 2.5 meter thick layer, contained horizons attributed to the BSK complex (Figure 4/1–4), the C–K culture (Figure 4/5–8), the Middle Bronze Age (Figure 4/9–12), the Early Iron Age, the Late Iron Age, Antiquity, and the Early Byzantine period.⁵⁴ Animal bones from the C–K horizon yielded absolute dates which position the horizon into the end of the fourth millennium BC (32nd/31st century cal. BC) (Table 1).⁵⁵ As the site is surrounded by a 45° slope on one side, and a cliff on the other, this site would be attributed to the hilltop settlements typical for the C–K culture settlement pattern (Figure 3a).⁵⁶

The earliest finds from the rock shelter are attributed to the BSK culture. It is represented by a relatively thin, 0.2 meter thick layer of yellow soil.⁵⁷ Apart from pottery and bones, the layer had no traces of architecture, such as lumps of daub and post-holes. Therefore, it is possible that the rock shelter provided sufficient protection from the elements, or served as a support for some sort of light, wooden construction.⁵⁸ Animal bones are scarce, which prevented further insight into the economy of the communities from this period. Archaeobotanical analyses indicate that almost all of the plants known from preceding Vinča settlements were utilised, such as two sorts of wheat, barley, lentil, pea, and millet, and cornel in terms of wild species.⁵⁹

The material culture of the Early Bronze Age C–K culture, from a 0.7 meter thick layer of brown soil, is highly represented by decorated pottery. The pottery is decorated in the *furchenstich* technique, and fur-

⁵² Janković & Janković 1976; Булатовић, Капуран & Јањић 2013; Капуран & Булатовић 2013; Капуран & Булатовић 2015.

⁵³ Janković & Janković 1976; Sretenović 1980; Шпехар & Радишић 2015.

⁵⁴ Капуран, Булатовић & Јањић 2012; Капуран & Јањић 2015.

⁵⁵ Bulatović, Gori & Vander Linden 2020.

⁵⁶ Капуран & Булатовић 2012a.

⁵⁷ Булатовић 2015.

⁵⁸ *Ibid.*

⁵⁹ Филиповић 2015.

row grooving, *linsen* application, incised net motifs, and infrequently in the so-called *caterpillar* manner (Figure 4/5–8).⁶⁰ In contrast to the earliest horizon, lumps of wall daub with wattle impressions, and one hearth, were recorded within the layer of the C–K culture, indicating a dwelling structure built in the wattle and daub technique. Activities related to the preparation of food took place around the hearth, and archaeobotanical analyses indicated that the selection of food was conducted, such as the separation of unwanted seeds, weeds, and inedible parts of plants, cereals, and legumes.⁶¹ Animal remains from this horizon are represented by ovicaprids (33.2%), cattle (28.4%), pig (17.5%), and dog.⁶² Wild animals are represented with only 13%, of which deer with 5.7%, followed by doe, wild boar, beaver, and fox. Fish are represented by catfish, and a significant number of shells were recorded as well. This data indicates an economy based on a combination of stockbreeding, hunting, and fishing, although the representation of a domestic pig indicates a certain degree of a sedentary lifestyle of the C–K communities at this site.

The Middle Bronze Age horizon could not be separated within trenches, since finds from that period were recorded exclusively within a layer of dark brown soil, mixed with pottery from the Early Iron Age (Ferigile), Late La Tène, and Antiquity.⁶³ The Middle Bronze Age is represented by smaller globular vessels with thin walls. Such vessels are usually lavishly decorated with shallow incised motifs of reverse hatched triangles, or variously hatched horizontal bands (Figure 4/9–12). Middle Bronze Age pottery displays similarities with the ceramic inventory at the site of Banjska Stena near Zaječar and the Verbicioara culture too (Figure 7/9–10).⁶⁴ According to the latest absolute dates from graves at the Magura necropolis near Felix Romuliana, the Bronze Age settlement at Banjska Stena could be positioned into the transition between the Middle and Late Bronze Age, or approximately around 1700–1500 years BC.⁶⁵

⁶⁰ Булатовић 2015.

⁶¹ Филиповић 2015.

⁶² Булатовић & Милошевић 2015.

⁶³ Капуран & Јањић 2015.

⁶⁴ Срејовић & Лазих 1997.

⁶⁵ We would like to thank our colleague Mario Gavranović from the Austrian Archaeological Institute for providing us with insight into the absolute dates from some of the graves at the Magura necropolis. A publication on the necropolis is in preparation; Kapuran et al. *forthcoming*.



Figure 5: a) Bolvan site; b) Rgošte – Čuka site.

Several kilometres west of Knjaževac, near the Banjica thermal springs in Rgošte village, a cluster of settlements that cover strategically dominant locations are located above the Svrlijski Timok valley (Map 1). Two of those sites are particularly interesting: Rgošte–Čuka, and Bolvan (Figures 5a and 5b). The surveys of those sites determined a cultural stratigraphy comprising BSK, C–K, and Middle Bronze Age horizons. It seems as if the narrow passage with a thermal water source represented an important spot for the Copper and Bronze Age populations, which resulted in the formation of these settlements. Those settlements most likely controlled the passage through the several kilometers-long valley systems.⁶⁶

It has been three decades since the hilltop settlement of Banjska Stena near Gamzigradska Banja, around eight kilometers west of Zaječar, was excavated (Map 1; Figure 6).⁶⁷ The excavations were directed by D. Sreјović, member of the Academy; excavations of the necropolis with incinerated burials at Magura hill, and the sites of Beligovo and Miletov Bunar, were conducted simultaneously.⁶⁸ The excavations were conducted by the Centre for Archaeological Research of the Faculty of Philosophy from 1994 to 1996. The excavations ended with the untimely passing of D. Sreјović. The renewed excavations at the site of Banjska Stena were conducted in 2022 by the Institute of Archeology in Belgrade and the Austrian Academy of Sciences in Vienna.⁶⁹ The excavations were conducted within the project “Bronze Age in north-eastern Serbia – metallurgy, settlements and necropolises”. The goal of the excavations was to acquire fresh absolute dates from the cultural horizons of the Copper and Bronze Age, and to reassess the claims of previous researchers regarding the existence of traces of copper metallurgy at the site.⁷⁰ The cultural stratigraphy of the settlement at Banjska Stena is represented by cultural layers attributed to the BSK culture, the C–K culture, the Middle Bronze Age, the La Tène period, and Late Antiquity (Figure 7).⁷¹ Banjska Stena displays all of the topographic characteristics relevant to

⁶⁶ Капуран & Булатовић 2012b; Капуран & Булатовић 2013; Капуран 2014.

⁶⁷ Срејовић & Лазић 1997; Лазић 2010.

⁶⁸ Срејовић & Лазић 1997; Лазић 2010; Николић & Ђуричић 1997; Сладић & Ружић 2001.

⁶⁹ Kapuran et al., *forthcoming*.

⁷⁰ *Ibid.*

⁷¹ Лазић 2010.

the sites presented in this paper. The settlement is located on the top of a rock which holds a dominant position over a meander of the Crni Timok river. The eastern and southern sides of the site are surrounded by steep rocks that rise above the river bank, and the site is accessible from the west. M. Lazić reported that the accessible part of the site was fortified with a rampart made of crushed stone, additionally reinforced by a wooden palisade, during the Bronze Age. Additionally, the author reports certain traces of copper metallurgy.⁷² The renewed excavations have confirmed the existence of the aforementioned fortifications, yet the only traces of metallurgy – exclusively ferrous metallurgy – originate from archaeological contexts attributed to the La Tène period and Antiquity. The Banjska Stena settlement had visual contact with several sites in its surroundings, of which solely Beligovo was archaeologically excavated.⁷³ The renewed research at Banjska Stena did not determine the existence of the Early Copper Age layer, save for sporadic finds of potsherds. Hence, the BSK horizon in this paper is illustrated by finds from the surface of the site (Fig. 7).⁷⁴

Instead of a conclusion

The research done by members of our Academy, primarily N. Tasić, B. Jovanović, and D. Srejskić, who discovered Lazar's (Zlot) cave, Rudna Glava, and Lepenski Vir, represented the best beacon for our research. Although our discoveries will not have such a profound impact, they can provide a better understanding of certain dilemmas that we have faced at the beginning. We hope that our results regarding cultural stratigraphy and the distribution of prehistoric settlements in north-eastern Serbia will provide an incentive for new generations to continue our work, as we have continued the work of our predecessors. We are fortunate to live in a time of dynamic technological innovations, especially in terms of dating organic materials, which help us solve and correct certain misconcep-

⁷² Лазич 2010.

⁷³ Николић & Ђуричић 1997.

⁷⁴ It is thanks to Saša Rakezić-Zograf, who has a vacation home near Banjska Stena, and who collected pottery left behind by numerous "treasure hunters" for years, that we have a chance to provide an overall cultural stratigraphy of the site. We would like to take this opportunity to thank him for his enthusiasm and his great help.



Figure 6: a) Banjska stena site with surrounding from the North; b) Banjska stena site, from the south.



Figure 7: Banjska stena, 1. BSK; 2–4. C-K; 6, 7, 9, 10. Middle Bronze Age pottery; 5. Copper needle; 8. Antler axe.

tions, common in every science, which by no means diminish the contribution of the mentioned scholars. We truly hope and believe that research of multilayered prehistoric sites in the territory of north-eastern Serbia, which we have been conducting for the last decade, has lived up to the expectations of our senior colleagues, whose guidance we have followed. We consider that our contribution lies in the significant correction of the overall image of prehistoric cultures in this part of Serbia, compared to the monumental publication of *The Prehistory of Yugoslavia*.⁷⁵ Through international collaborations, we were able to determine a more precise chronological span for the populations that inhabited the territory of north-eastern Serbia from the fifth to the first millennium BC. Guided by the opus of the member of the Academy, N. Tasić, we have pointed out that his results and interpretations remain relevant, his papers are cited, which all points to the great influence he has had in Serbian archaeology. We would like to express our gratitude to our colleague Nikola Tasić, who always had time for us, gave us useful advice, and selflessly helped us whenever he could.

⁷⁵ Praistorija jugoslavenskih zemalja III–IV.

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Ognjen Mladenović*

Institute of Archaeology
Belgrade, Serbia

Caves, Herdsmen, and Migrants of the Late Eneolithic

Abstract: The paper discusses a specific settling aspect of the bearers of the Late Eneolithic Coţofeni–Kostolac group in the territory of Serbia: the utilisation of caves and cavelets. Compared to other periods of later prehistory, bearers of the Coţofeni–Kostolac group seemingly display a higher preference for settling in caves, or in their immediate surroundings. Such a trend has been interpreted in tight relation to their presumed subsistence strategies, based primarily on mobile stockbreeding. The paper will aim to provide further chronological and cultural insight into such interpretations, with a small overview of the existing data.

Key words: caves, north-eastern Serbia, Late Eneolithic, Coţofeni–Kostolac, pastoralism

Nikola Tasić, member of the Serbian Academy of Sciences and Arts, had a great impact on the study of chronology, periodisation, and mutual relations of Eneolithic groups in South-eastern Europe, as his publications represent a starting point for any current and future studies.¹ His research was focused on the formation, development, and mutual relations of a number of cultural groups, often surpassing the scopes of South-eastern Europe, and providing firm narratives on a turbulent period such as the Eneolithic within a wider Eurasian context. With six chapters on Eneolithic groups in Yugoslavia,² he laid the foundations for understanding the significance of the Eneolithic in the development of various aspects of the human past. It was within those chapters that N.

* mladenovic40@gmail.com

¹ Тасић 1982–1983; Тасић 1985; Тасић 1990; Тасић 1995.

² Тасић 1979.

Tasić defined a specific manifestation of the Late Eneolithic in Serbia, the so-called Coţofeni–Kostolac group.³

Introduction

The Coţofeni–Kostolac group represents quite a specific Late Eneolithic phenomenon, which is primarily defined on the basis of a particular mixture of ceramic forms and decorations characteristic of two Late Eneolithic neighbouring groups, the Coţofeni and the Kostolac groups.⁴ Traditionally, the territories associated with this phenomenon are western Romania, eastern parts of Serbian Banat, south-western Oltenia, and north-western Bulgaria,⁵ although relatively recent research into the museum collections throughout Serbia has pointed out that the highest density of sites attributed to the Coţofeni–Kostolac group has been recorded in north-eastern Serbia, from the confluence of the Mlava and Danube rivers in the west, to the Iron Gates region in the east, and further to the south in the area of the Kučaj mountains, Bor, and Zaječar (Fig. 1).⁶ The territory of north-eastern Serbia, or Carpathian Serbia, represents the continuation of the Carpathians into the territory of Serbia. It is characterised by a diverse relief, in which karst covers parts of the Beljanica, Kučaj, Devica, and Homolje mountains.⁷ Additionally, sites with material culture attributed to the Coţofeni–Kostolac group have also been recorded within the Nišava valley,⁸ the lower course of the West Morava valley, and the Great Morava valley.⁹

The appearance of the bearers of the Coţofeni–Kostolac group in Serbia is positioned in the second half of the fourth millennium BCE,¹⁰ and the Bayesian modelling of absolute dates from the sites of Belovode, Vučedol, Bujanj, Gomolava, Mokranjske Stene, Pivnica, Ostrovul Corb-

³ Tasić 1970; Tasić 1978; Tasić 1979a; Tasić 1979b; Tasić 1981; Tasić 1982. Besides these works, the most comprehensive overview of the Coţofeni–Kostolac group in Serbia was provided by A. Капуран and A. Булатовић (Капуран & Булатовић 2012).

⁴ Tasić 1979, 120–122; Nikolić 2000, 48–53; Капуран & Булатовић 2012, 8–11.

⁵ Роман 1976, 13–14.

⁶ Капуран & Булатовић 2012, 2.

⁷ Мишовић 2011, 198.

⁸ Стојић & Јоцић 2006; Булатовић 2009; Булатовић & Јовић 2010.

⁹ Стојић 1989; Стојић & Чађеновић 2006.

¹⁰ Капуран & Булатовић 2012.

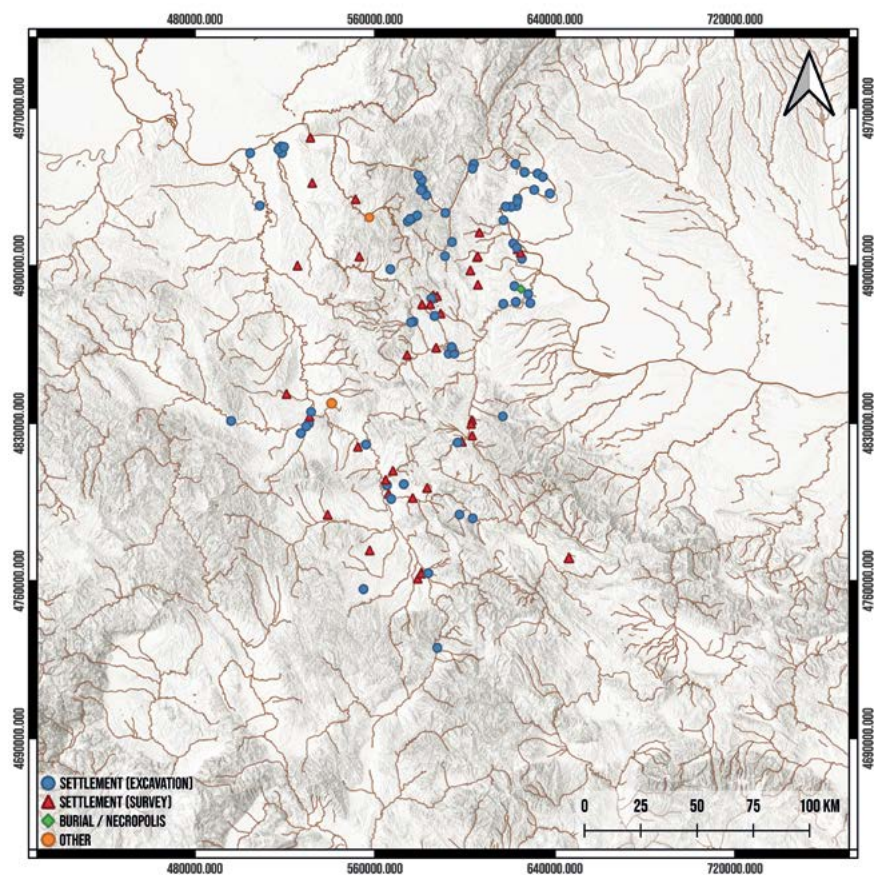


Figure 1. The sites of the Coțofeni-Kostolac group in Serbia (O. Mladenović).

ului, Poiana Ampoiului, and Băile Herculane, position the group between the final three centuries of the fourth and the first three centuries of the third millennium BCE.¹¹ Besides the aforementioned parameters that have enabled the separation of the Coțofeni–Kostolac group, such as the permeation of ceramic forms and decorations, another specificity can be observed within the settling traditions of the Coțofeni–Kostolac communities. The settling typology and architecture of both the Coțofeni and Kostolac groups have previously been minutely discussed,¹² while

¹¹ Bulatović, Gori & Vander Linden 2020, 1173, Figure 4.

¹² Roman 1976, 14–15; Tasić 1979, 118–119; Ciugudean 2000, 17; Nikolić 2000, 17.

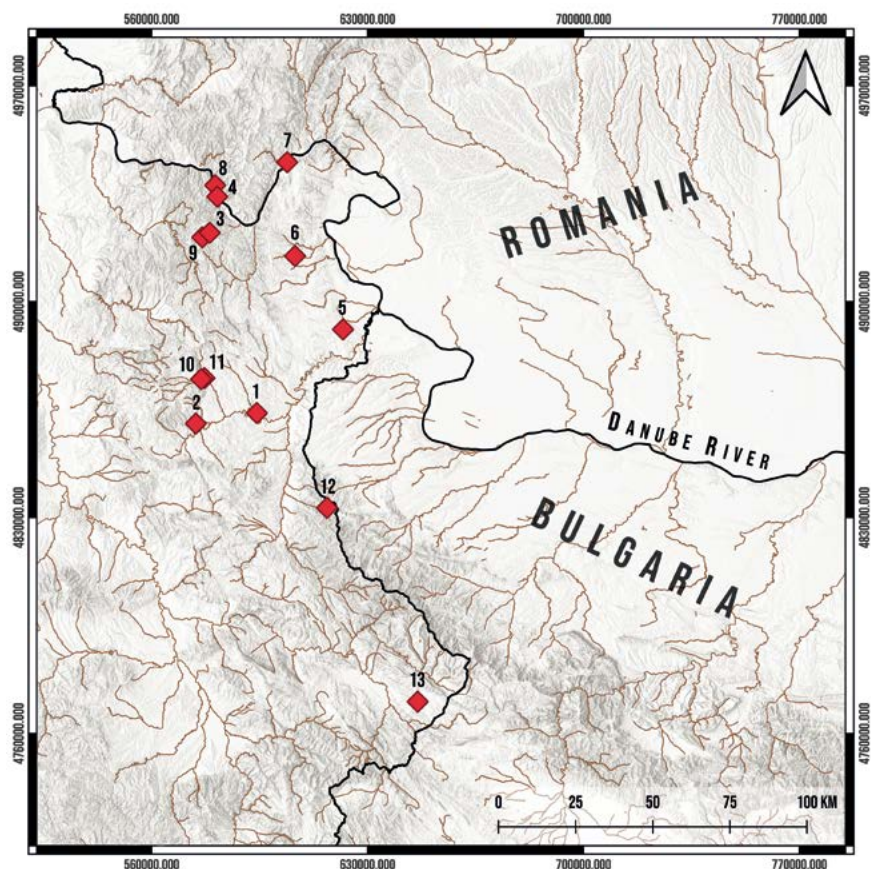


Figure 2. Coțofeni-Kostolac sites in caves/cavelets in Serbia (O. Mladenović).

the Coțofeni–Kostolac settling traditions and architecture within the territory of north-eastern Serbia have been recently analysed by A. Kapuran and A. Bulatović.¹³ Compared to the representation during the preceding and following periods of later prehistory in the Central Balkans, the settling and/or utilisation of caves and cavelets can be observed as yet another characteristic of the Late Eneolithic Coțofeni group in the territory of present-day Romania and the Coțofeni–Kostolac group in north-eastern Serbia.¹⁴ The human utilisation of caves spans throughout

¹³ Капуран & Булатовић 2012; Kapuran 2014, 41–45.

¹⁴ Капуран & Булатовић 2012, 68–69.

various time periods and territories, and caves have, aside from being a place of habitation, served as gathering places for spiritual and religious activities.¹⁵ One such site is the renowned Zlot cave (*Zlotska pećina*), excavated and published by no other than Nikola Tasić. The aim of this paper is to provide an overview of the utilisation of caves by the bearers of the Coţofeni–Kostolac group, with reference to possible reasons and mechanisms behind such a higher representation of cave settling.

Catalogue of sites (Fig. 2)

1. Banjska Stena

A multilayered prehistoric hillfort settlement positioned on a dominant plateau above a river meander, on the right bank of the Crni Timok river, at an altitude of 180 meters. The site consists of a hillfort and a cavelet in its foothill. The hillfort was excavated in 1994, while the cavelet was test-trenched in 1996, and surveyed in 2001 and between 2009 and 2010.¹⁶ The excavations of the hillfort yielded remains of a rampart, dwellings, and portable archaeological material attributed to the Early and Late Eneolithic, the Middle Bronze Age, and the Late Iron Age (La Tène period). On the other hand, ceramic finds from the cavelet are attributed solely to the Late Eneolithic and the Middle Bronze Age.¹⁷

2. Bogovinska Pećina

The site is located in the eastern foothill of the Kučaj mountain, at an altitude of 268 meters. Although not excavated, the site was surveyed in 1981 and 1983, and yielded potsherds attributed to the Late Eneolithic and the Middle Bronze Age. The authors of the surveys indicate that the settlement was most likely spreading on terraces above the cave, as most of the recorded potsherds were distributed at the entrance of the cave.¹⁸

3. Kapetanova Pećina

The site is located at the very entrance to the cave, which is positioned on top of an amphitheatre-shaped rock, at an altitude of 570 me-

¹⁵ Goldberg & Bar-Yosef 2019, 218.

¹⁶ The excavations were continued in 2022 by the Institute of Archaeology in Belgrade and the Austrian Archaeological Institute.

¹⁷ Лазих 1997, 59–61; Капуран & Шкундрић 2009; Капуран 2014, 127.

¹⁸ Капуран, Булатовић & Јовановић 2014а, 199–200; Капуран 2014, 108.

ters. Small-scale excavations at the site were conducted in 1996,¹⁹ and yielded potsherds attributed to the Late Eneolithic and the Middle Bronze Age.²⁰

4. Lepenska Potkapina

The site was positioned in a cavelet facing the Danube river, located approximately 50 meters above the renowned site of Lepenski Vir. The site was excavated in 1968, when a total of four cultural layers have been determined, of which cultural layer II was attributed to the Late Eneolithic period. Other cultural layers at the site are attributed to the Early Neolithic, Late Bronze Age, and the Roman Period.²¹ Unfortunately, the site was submerged during the construction of the Iron Gates hydroelectric power station.

5. Mokranjske Stene – Potkapina

The site is located in the village of Mokranje near the present-day city of Negotin, and in fact represents an archaeological complex comprising at least two sites – Kamenolom and Potkapina – of which the second represents the cavelet discussed in this paper. The site of Potkapina was discovered during a survey in 2011, and archaeological excavations were conducted in 2011 and 2013.²² It lies on an elongated elevation that runs north—south, and it is divided into two areas – upper and lower. The upper area lies at an altitude of 150 meters, and the lower area represents a small cavelet at an altitude of 130 meters, within a canyon that separates the sites of Kamenolom and Potkapina. The site is surrounded by the Sokolska river from the south, east, and west. Multidisciplinary excavations, including archaeozoological, palaeobotanical, and anthropological analyses, have provided a vast number of important data on the settling at the site.²³ The excavations at this portion of the site yielded a total of four cultural layers: (1) a 0.3–0.7 meters thick Byzantine layer;

¹⁹ The cave yielded a 3-meter thick cultural layer, which yielded finds attributed exclusively to the Coţofeni–Kostolac group. Likewise, such a cultural layer indicates long-term settling, and therefore represents an exception (Kapuran & Bulatović, in this volume, footnote 21).

²⁰ Kapuran 2014, 112.

²¹ Јевтић 1982–1983, 201–207; Nikolić 2000, 25; Kapuran 2014, 121.

²² Kapuran 2012; Капуран, Булатовић & Јањић 2013; Kapuran & Milošević 2013; Kapuran Bulatović & Milošević 2014b.

²³ Булатовић & Милошевић 2015; Филиповић 2015.

(2) a 0.5–0.7 meters thick mixed layer with Byzantine, Iron Age, Bronze Age, and Late Eneolithic finds; (3) a 0.7 meters thick Late Eneolithic layer attributed to the Coțofeni–Kostolac group; (4) a 0.2 meters thick Early Eneolithic layer attributed to Bubanj–Sălcuța–Krivodol complex. The third layer (3), attributed to the Coțofeni–Kostolac group, yielded numerous finds of characteristic potsherds (Pl. 1/7–13), as well as faunal remains, and remains of architecture such as lumps of daub and a hearth floor.²⁴

6. Pećina ispod Velikog Mosta

The site/cave is located on the left bank of the Vratna river, at an altitude of 156 meters. Surveys conducted in 2010 indicated that the cave was settled during the Late Eneolithic and the Early Iron Age.²⁵

7. Pećina kod Trajanove Table

The site is located in a cave approximately 25 meters above Trajan's Bridge on the Danube, at an altitude of 90 meters. Small-scale excavations at the site were conducted in 2004 and 2005. The excavations determined a disturbed stratigraphy of the cave, with finds from the Late Eneolithic, two phases of the Early Iron Age, and the Mediaeval Period.²⁶

8. Pešćera Mare

The cave is located between the village of Dobra and the renowned Mesolithic site of Lepenski Vir, and lies on top of a rocky hill called Velika Rudina, at an altitude of 245 meters. Archaeological excavations were conducted in 2004, and resulted in a separation of two chronological horizons, containing faunal remains, dwelling features, and hearths. According to the stylistic and typological characteristics of recorded potsherds, those are attributed to the Late Eneolithic (Pl. 1/1–6) and the Early Iron Age.²⁷

²⁴ Булатовић, Капуран & Јањић 2013, 148–151; Булатовић 2015, 23–30.

²⁵ Капуран 2014, 140.

²⁶ Капуран, Јевтић & Борић 2007, 113–118; Капуран, Булатовић & Јовановић 2014а, 181.

²⁷ Борић 2015; Dimitrijević & Svetković 2015; Капуран, Јевтић & Борић 2007, 106–113; Капуран, Булатовић & Јовановић 2014а, 77–78.

9. Rajkova Pećina

The cave is located above the spring of the Mali Pek river, at an altitude of 520 meters. Archaeological excavations were conducted in 1995/1996, and yielded potsherds attributed to the Late Eneolithic.²⁸

10. Vernjikica

The cave is located at an altitude of 421 meters, and archaeological investigations have confirmed the existence of a cultural layer with potsherds attributed to the Late Eneolithic.²⁹

11. Zlotska Pećina

This cave settlement is located within the eastern fringe of the Kučaj mountains, approximately 20 kilometres southwest of the present-day city of Bor. The cave lies in the canyon of the Zlot river, at an altitude of 219 meters. Archaeological excavations of the site were conducted in 1963, 1964, 1968, and 1969. The site itself represents one of the best-explored prehistoric cave sites in the territory of Serbia. The excavations resulted in a significant collection of potsherds, bone, copper, and iron artefacts. The architecture recorded within the cave is represented by the remains of stamped floors, and several hearths made of stone slabs. N. Tasić separated a total of three distinct cultural horizons at the site. The earliest is attributed to the Middle Eneolithic, the second to the Late Eneolithic (Pl. I/14–18), and the latest to the Early Iron Age.³⁰ Further, Late Bronze Age and Late Iron Age materials have been separated as well.³¹

12. Kožuvarska Glama³²

The cave is located several meters above the banks of a local creek in Novo Korito near Knjaževac, at an altitude of 474 meters. Archaeological excavations of the site were conducted in 1997 but, unfortunately, the results were never completely published. The ceramic inventory recorded

²⁸ Kapuran 2014, 112.

²⁹ Kapuran 2014, 106; Капуран, Булатовић & Јовановић 2014, 122.

³⁰ Tasić 1963; Tasić 1964; Tasić 1968; Tasić 1969; Tasić 1971, 71–75; Tasić 1982, 23; Tasić 1995, 192–173.

³¹ Булатовић, Капуран & Јовановић 2011, 122; Kapuran 2014, 106.

³² This site, as well as Petrlaška Pećina (Cat. No. 13), are two sites that geomorphologically do not belong to Carpathian Serbia. However, both sites are located within the Balkan part of Serbia, likewise characterised by karst relief. In fact, Petrlaška Pećina is located on the fringe of Odorovsko Polje, the only and largest karst field in Serbia (Мишовић 2011, 198).

at the site is attributed to the Late Eneolithic and several phases of the Iron Age.³³

13. Petrlaška Pečina

The cave is located within the south-western periphery of Odorovsko Polje, at an altitude of 686 meters. The potsherds recorded at the site are attributed to the Early Neolithic, Late Eneolithic, and Early Iron Age.³⁴

Subsistence Strategies of the Coțofeni–Kostolac group

The higher degree of settling/utilisation of caves by the bearers of the Coțofeni and Coțofeni–Kostolac groups has traditionally been interpreted in close connection with their presumed subsistence strategies. Namely, authors have argued that the single-layered sites at higher altitudes point to a seasonal settling, and indicate the possible practice of transhumant or semi-nomadic pastoralism,³⁵ additionally supported by the quantitative representation of sites within specific geomorphological areas, especially within hilly and mountainous ones (e. g. the Carpathian mountain range) (**Fig. 1**). Such an idea is further supported by unfortunately insufficient archaeozoological studies, which indicate the dominant role of domestic animals within faunal assemblages, especially ovicaprines, which are commonly represented within those communities that practise some type of mobile stockbreeding.³⁶ Additionally, besides the settling or possible utilisation of caves as stables for stock (**Fig. 3**),³⁷ and the single-layered nature of the majority of sites, the number of sites attributed to the Coțofeni–Kostolac group which are positioned in lowland areas of the Danube's right bank might also indicate seasonal mobility. Such mobility could have been based on vertical migrations between the lowland banks and the hilly and mountainous karst regions in the hinterland, and seasonal exploitation of complementary pastures.³⁸ Ad-

³³ Kapuran 2014, 137.

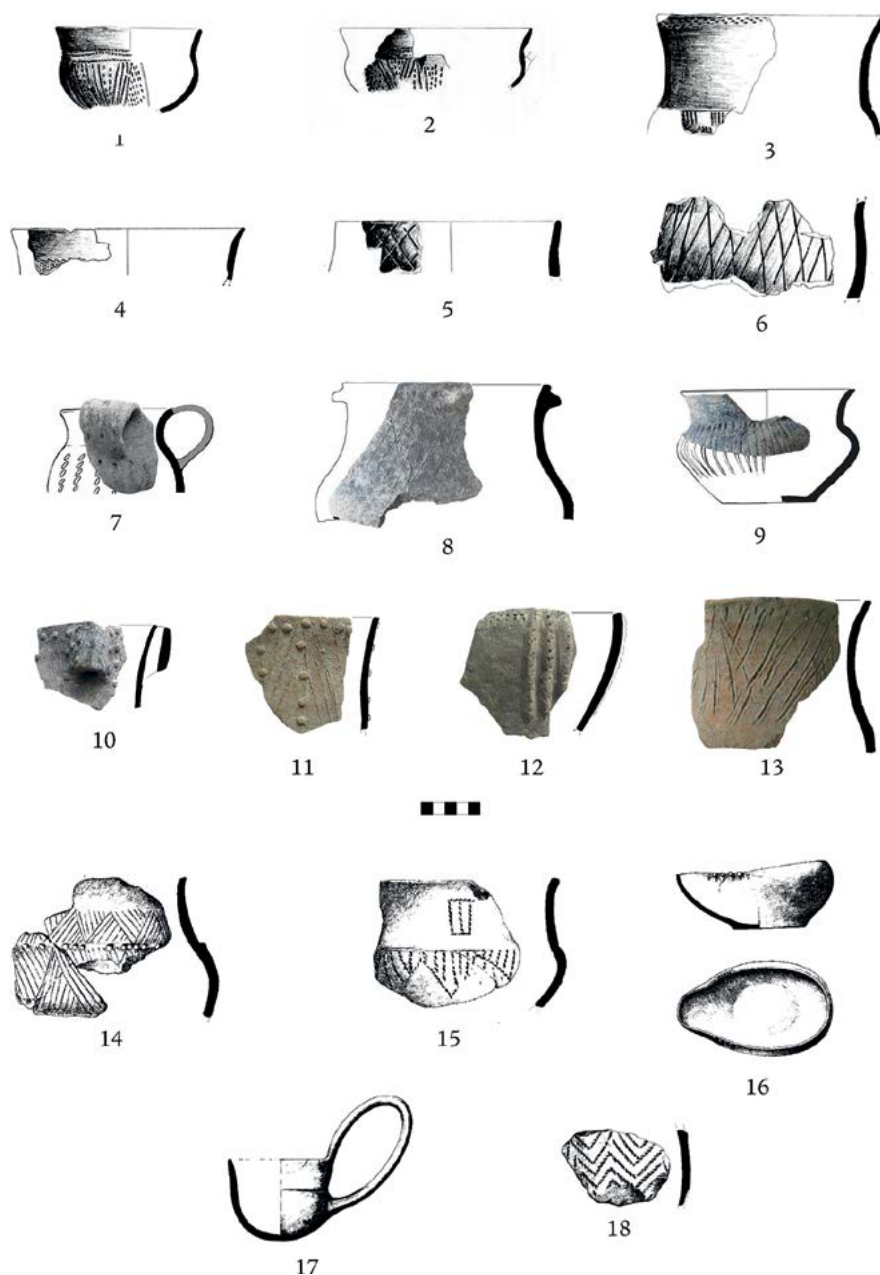
³⁴ Стојић 1994, 94; Стојић & Јоцић 2006, 89.

³⁵ Roman 1976; Tasić 1979b; Kapuran 2014; Ciugudean 2000.

³⁶ Ciugudean 2000; Arnold & Greenfield 2006, 10; Bindea & Pop 2013; Popa & Gogâltan 2014.

³⁷ Cf. Forenbaher & Kaiser 2008, 138–139; Boschian 2009.

³⁸ Khazanov 1983, 19–20; Капуран & Булатовић 2012, 81–82. Cf. Garašanin 1994; Porčić 2007; Porčić 2008; Forenbaher 2011.



Pl. 1. A selection of Coșofeni-Kostolac pottery from caves/cavelets in Northeastern Serbia: 1-6, Pešćera Mare; 7-13, Mokranjske Stene; 14-18, Zlatska Pećina.

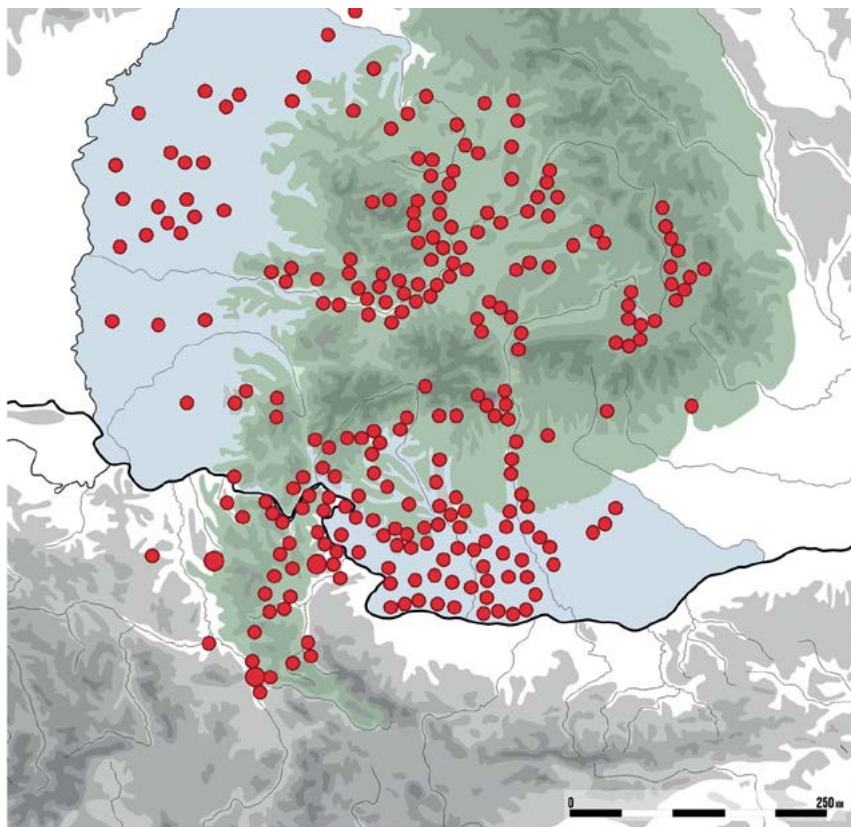


Figure 3. The sites of the Coțofeni group in Romania and the Coțofeni-Kostolac group in Serbia. Blue and green mark the lowland and highland areas (Bulatović & Kapuran 2016, modified).

ditionally, sites positioned in lowland areas of the Danube's right bank could have also served as suitable crossing points.³⁹ Archaeozoological data from the sites of Mokranjske Stene (Cat. No. 5) in north-eastern Serbia, and Bubanj within the Niš basin, support the idea of the dominant role of stockbreeding and the exploitation of domestic animals, primarily ovicaprines.⁴⁰

In contrast, authors have recently raised a question regarding such an interpretation of subsistence strategies of the Coțofeni–Kostolac group

³⁹ Капуран & Булатовић 2012, 71.

⁴⁰ Булатовић & Милошевић 2015.



Figure 4. A cave used as a sheepfold, photo from 1989 (Forenbaher 2011).

within the territory of Serbia. The existence of lowland settlements attributed to the Coțofeni–Kostolac group, and the finds of presumed farming tools within the Zlot cave, both supposedly pointed to agriculture.⁴¹ Based on finds of bone tools from the Zlot cave, N. Tasić defined the site as a possible Late Eneolithic antler tools production centre.⁴² However, similar antler tools have been recorded within Coțofeni contexts throughout Transylvania, and those have been interpreted as tools for digging or planting/gardening, and not necessarily connected with the cultivation of crops, yet could have also been used for digging pits of various functions. Interestingly, those tools represent the only category of Coțofeni bone tools which could be connected with these sorts of activities (Fig. 4).⁴³ Additionally, the botanical assemblages from Coțofeni sites in Romania indicate the existence of domesticated cereals within cave sites, where emmer, einkorn, and barley have been recorded.⁴⁴

⁴¹ Spasić 2010, 158–160, with cited literature.

⁴² Cf. Tasić 1963; Tasić 1979a, 122; Spasić 2010, 160.

⁴³ Popa & Gogâltan 2014, 56–58, with cited literature.

⁴⁴ A similar representation of cereals has been recorded at the site of Bubanj and concurrent sites in Bulgaria and northern Greece (Popova & Božilova 1998; Ciuta 2012, 108, 113–119; Valamoti et al. 2019; Filipović 2020, 347–348, Table 4; Popova & Hristova 2020).

Although the data on possible farming tools, lowland settlements, and the presence of domesticated cereals in, presumably, pastoral settlements seems contrasting to the idea of transhumant subsistence strategies of the bearers of the Coţofeni–Kostolac groups, they do not necessarily reject such an idea. According to A. Khazanov, agriculture represents a common secondary or supplementary subsistence activity in those societies that practise either transhumant or semi-nomadic pastoralism.⁴⁵ Further, ethnographic data confirm that seasonal herdsmen engaged in small-scale agriculture as an additional form of subsistence, or acquired additional hay from those communities oriented primarily towards agriculture.⁴⁶ Additionally, two specific types of settling locations of the Coţofeni–Kostolac communities within north-eastern Serbia speak in favour of seasonal settling.⁴⁷ Primarily, those are caves and cavelets that reach an altitude of up to 570 meters (15.5% of Coţofeni–Kostolac sites in north-eastern Serbia).⁴⁸ Besides the presumed and ethnographically and archaeologically confirmed utilisation of caves and cavelets for sheep herding,⁴⁹ caves and other karst formations have also been known to retain water in form of ice during dry and cold periods,⁵⁰ acting as a stable supply of water during the dry months, similar to karst sinkholes,⁵¹ and retain a constant temperature, which is suitable during harsh winter months.⁵² The other type of settling locations that might indicate seasonal settling are sites positioned on dominant high ground above estuaries and other sources of water (70.4% of Coţofeni–Kostolac sites in north-

⁴⁵ Khazanov 1983, 19–20.

⁴⁶ Marcu 1976; Лутовац 1976, 29, 32, 34.

⁴⁷ Капуран & Булатовић 2012, 81–82.

⁴⁸ Based on the sample of 72 sites.

⁴⁹ Forenbaher 2011. Within the territory of north-eastern Serbia, caves connected with the Coţofeni–Kostolac group are often in spatial connection with other settlements, thus further indicating their specific utilisation, possibly as shelters for herds, or even temporary shelters during cold winter months (Капуран & Булатовић 2012, 69).

⁵⁰ Мишовић 2011, 77–78.

⁵¹ Karst relief covers approximately 3,000,000 km² in Europe, thus providing up to half of the drinking water in a number of European countries. In Serbia, numerous cities and towns rely on karst as a stable source of drinking water (Niš, Paraćin, Bor, Ćuprija, Piroć, Valjevo, Priboj, Prijepolje, Peć, Novi Pazar) (Јемцов 2021, 10).

⁵² Лутовац 1976, 27–29; Капуран & Булатовић 2012, 68–69.

eastern Serbia),⁵³ therefore indicating the importance of permanent sources of water necessary for both herds and people.

In their comprehensive work on the origin of transhumant pastoralism in South-eastern Europe, Arnold and Greenfield have separated a total of five basic types of traditional pastoralism within the given territory, of which type 3 would correspond to the topography and spatial disposition of Coţofeni–Kostolac sites in Serbia. The given type implies permanent settling into lowland relief, from which herds were moved to summer pastures in higher altitudes.⁵⁴ On the other hand, one of the theories on the origin of transhumant pastoralism is the so-called *Regional symbiosis*, which implies the development of symbiotic relationships between groups (archaeological) and regions. It is tightly connected with specialisations in the production of certain communities (e. g. agriculture vs pastoralism). Such conditions create a specific setting for the emergence of transhumant pastoralism, which serves as a means for the transportation of goods, ideas, and people between highland and lowland regions.⁵⁵ In such a setting, with mutual benefits, the symbiosis between the newcomers of the Coţofeni and local Kostolac communities could possibly be hypothesised, especially regarding the settling topography of the Kostolac group, which is represented by settlements in lowland regions and river valleys, suitable primarily for agriculture.⁵⁶ Botanical assemblages and finds of grinding stones used for food preparation from concurrent sites attributed to the Kostolac group likewise indicate either a higher or a primary role of agriculture within those communities.⁵⁷

A wider chronological, territorial, and cultural context of the appearance of the Coţofeni–Kostolac group within the territory of Serbia might indicate a preference for such subsistence strategies, a higher utilisation of caves/cavelets, and possibly indicate the mechanism behind the formation of the group. As mentioned above, the emergence of the Coţofeni–Kostolac group in Serbia is connected with the second half of the fourth millennium BCE, or more precisely the final three centuries of

⁵³ The data is taken from the author's unpublished PhD thesis (Settlement Patterns during the Late Eneolithic and the Early Bronze Age in the Central Balkans).

⁵⁴ Arnold & Greenfield 2006, 9.

⁵⁵ *Ibid.* 13, with cited literature.

⁵⁶ Tasić 1979b, 260; Nikolić 2000, 40–41.

⁵⁷ Van Zeist 2001–2002; Balen 2005, with cited literature; Vuković & Marković 2019, 230–233.

the fourth and first three centuries of the third millennium BCE.⁵⁸ The displacement of material culture typical for phase III of the Coțofeni group has been connected with presumed migrations, caused by the ever-increasing pressure of steppe populations that gradually penetrated from the east.⁵⁹ The presumed migrations can be observed by the appearance of archaeological material attributed to the Cernavodă group (Cernavodă III–Boleráz–Baden horizon) in a number of sites,⁶⁰ and certain changes and the adoption of foreign, steppe burial customs by populations that are considered bearers of the Coțofeni group, represented by the appearance of ceramic forms and decoration typical for the Coțofeni group within mound burials.⁶¹ Although such burials remain debatable, as certain scholars perceive those as remnants of Coțofeni III ceramic traditions within Early Bronze Age societies of the Carpathian basin.⁶² On the other hand, such graves are associated with newcomers, bearers of the Yamnaya group, who were buried with ceramic vessels typical for the Coțofeni and Makó groups, thus forming a number of regional Early Bronze Age groups of the Carpathian basin.⁶³ A fine example of such successive migrational movements, and the adoption of new burial customs, that might have shifted the bearers of the Coțofeni group further to the west into the territory of north-eastern Serbia, is represented by well-researched burials at the Sárretudvari–Őrhalom kurgan in eastern Hungary. Namely, the kurgan was occupied in three distinct phases, absolutely dated to periods between the 34th and the 32nd century BCE (Late Copper Age),⁶⁴ between the 29th and the 27th century BCE (transi-

⁵⁸ Bulatović, Gori & Vander Linden 2020, 1173, Figure 4.

⁵⁹ Tasić 1995, 43–45.

⁶⁰ Represented by the vertical stratigraphy at the site of Bubanj in the Niš basin in the Central Balkans, where the Coțofeni–Kostolac cultural layer is above the younger phase of the Cernavodă III–Boleráz–Baden cultural layer (Милановић 2011; Bulatović & Milanović 2020). The layer is dated between the 34th and the 32nd century BCE. For a complete list of Cernavodă III–Boleráz sites in the territory of Serbia, refer to Bulatović & Kapuran 2016, 186–190. It is important to highlight that the occurrence of material culture typical for Cernavodă III–Boleráz–Baden in the Central Balkans is represented by sporadic finds, single layers, and solely certain elements, thus seemingly reflecting the possible migrational nature of those occurrences.

⁶¹ Alexandrov 2019; Frînculeasa 2020.

⁶² Diaconescu 2020, with a complete overview on the chronology of pre-Yamnaya, Yamnaya, and post-Yamnaya manifestations in the territory of Transylvania.

⁶³ Cf. Gerling et al. 2012; Preda-Bălănică, Frînculeasa & Heyd 2020.

⁶⁴ Refers to Serbian chronology.

tion between the Late Copper and the Early Bronze Age), and finally between the 27th and the 26th century BCE (Early Bronze Age).⁶⁵ Further, the kurgan was subject to stylistic and typological, anthropological, and isotopic analyses, which pointed to the following. The earliest phase is possibly connected with the local descendants of Yamnaya immigrants; the second phase is connected with Baden group traditions, interestingly also connected with a possible eastern origin; while the final phase of the kurgan is connected with the Makó and Livezile groups, with Coțofeni III elements.⁶⁶ Further to the south, in the region of Vojvodina, the periphery of the Carpathian basin, barrows attributed to the pre-Yamnaya and Yamnaya horizons are dated to a similar period, between the final three centuries of the fourth and the first half of the third millennium BCE,⁶⁷ thus chronologically corresponding to the appearance and existence of the Coțofeni–Kostolac group in the Central Balkans, the fourth horizon of Yamnaya influence according to D. Diaconescu (c. 3100–2900 BCE), and Yamnaya graves in Bulgaria.⁶⁸ In such a turbulent period, presumably marked by successive population movements or cultural transmission from the east – as reflected by the stratigraphy of the aforementioned barrows and several sites in the Central Balkans – bearers of the Coțofeni group (phase III), “suppressed” from the north and the east, settled within north-eastern Serbia, which essentially represents the continuation of the Carpathian mountains within the territory of Serbia. The exact moment of settling of the bearers of the Coțofeni group, and the moment of their contact with the bearers of the Kostolac group, remain debatable. Namely, within the given territory,⁶⁹ there have been no sites that could be attributed solely to the Kostolac group, thus confirming that the settling of the bearers of the Coțofeni group predates those contacts. Based on the stylistic and typological analyses of ceramic inventories, it has been suggested that there are two distinct chronological phases

⁶⁵ According to the chronological and typological division in Serbia, such dates would correspond to the absolute dates of the Coțofeni–Kostolac group (Late Eneolithic) and the Bubanj–Hum II group (Late Eneolithic/Early Bronze Age).

⁶⁶ Horváth 2014, 100–103, with cited literature.

⁶⁷ Koledin et al. 2020, 369–371, Tab. 3.

⁶⁸ Diaconescu 2020, 26; Kaiser & Winger 2015, 127, Tab. 1.

⁶⁹ A different chronology is applied to the territory of Banat, where the connection between the Coțofeni and Kostolac groups might have occurred slightly earlier. For earlier contacts between Coțofeni and Baden communities, refer to Spasić 2010, 164.

in this region, the so-called pre-*Furchestich*⁷⁰ (Coțofeni), and the *Furchestich* phases (Coțofeni–Kostolac),⁷¹ which would correspond to Phases I and II of Coțofeni–Kostolac in the territory of Serbia according to N. Tasić.⁷²

By moving to the west, bearers of the Coțofeni group did not change their natural environment, and thus settled in a “known” territory, which geomorphologically reflected their core regions (Transylvania, Oltenia, Muntenia). In such a setting, the bearers of the Coțofeni group could have, in an undisturbed manner, relied on their traditional subsistence strategies, presumably based primarily on pastoralism, without a need for significant adaptation. This is likewise observable in types of settlements and specific architecture which, without changes, prevails in the territory of north-eastern Serbia as well. This implied the settling of the hilly and mountainous karst relief of north-eastern Serbia, along with the surrounding lowland areas. It is those lowland areas, along with the region of Banat, that could have served as a ground for their connections with the Kostolac group, and thus the formation of a unique phenomenon, marked as the Coțofeni–Kostolac group. The absolute dates for the Kostolac group (Vučedol, Đakovo–Franjevac, Kaznica–Rutak, Pivnica, Gomolava),⁷³ and for the Coțofeni–Kostolac group (Bubanj, Mokranjske Stene, Ostrovul Corbului, Băile Herculane, Poiana Ampoiului),⁷⁴ are practically concurrent and fall between the 32nd and the 28th century BCE (Fig. 5), further indicating the coexistence of these communities and their mutual correlations. The connection between those two groups, and the mechanism behind the formation of Coțofeni–Kostolac, could have represented cultural transmission through trade/exchange or, as mentioned above, a symbiosis between two communities with complementary subsistence strategies, to mutual benefit.

⁷⁰ Observed as one of the defining characteristics for the decoration of pottery of the Kostolac group.

⁷¹ Капуран & Булатовић 2012, 8–9.

⁷² Tasić 1979, 116–117. It should be highlighted that such periodisations, based on ceramic forms and ornamental techniques, should, due to a lack of systematic analyses of material, be taken with caution.

⁷³ Benkő et al. 1989; Durman & Obelić 1989; Balen 2005; Horvath & Balen 2012; Rajković & Balen 2016; Bulatović & Vander Linden 2017; Petrović & Jovanović 2002; Waterbolk 1988.

⁷⁴ Bulatović, Gori & Vander Linden 2020; Ciugudean 2000.

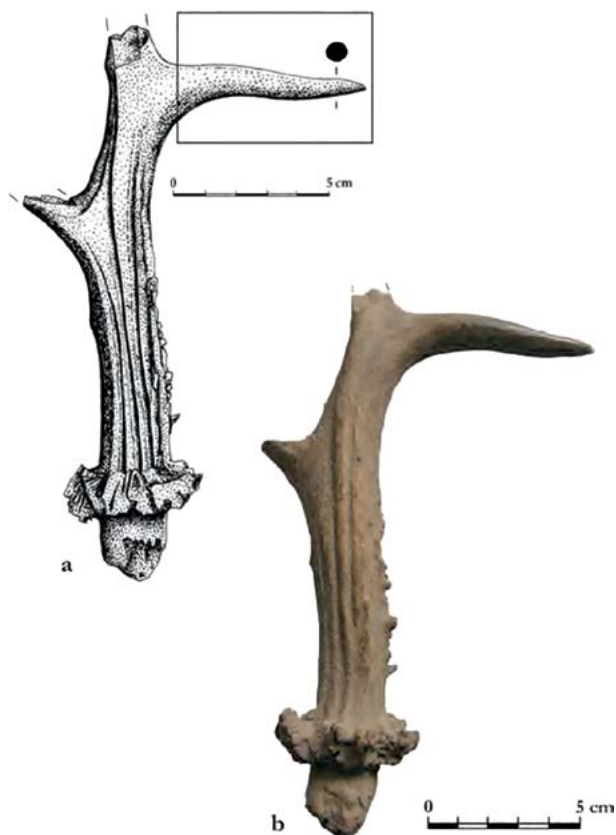


Figure 5. Antler tool from the site of Gligorești-Holoame, pit 9/1994 (Popa & Gogâltan 2014, modified).

The bearers of the Coțofeni–Kostolac group, now as a formed phenomenon of the Central Balkans, retained the territory of north-eastern Serbia as their “new” core territory. Although the material culture, primarily pottery attributed to the Coțofeni–Kostolac group, has been recorded further to the west, in river valleys of the West and South Morava (Jelenac, Jazbine, Lazarev Grad), Jablanica and Toplica (Dački Rid, Sas-tanci, Planište), and to the south within the wide Niš basin (Bubanj, Veli-ka Humska Čuka), the lack of absolute dates prevents us from interpreting these occurrences as possible further movement of populations or transmission of ceramic style through contacts, exchange and/or trade.

Bearers of the Coțofeni–Kostolac group settled in an area particularly favourable for their presumed subsistence strategies, which consists of hilly and mountainous relief surrounded by emphasised lowland territories. Whether the dislocation of these communities was forced by ever-increasing migrational pressures from the east, or represents a natural response to the increasing size of flocks, or a pursuit of new and rich grazing areas, or the mixture of both, the territory of north-eastern Serbia seemed like a logical choice. Nowadays perceived as a separate entity due to state borders between Romania and Serbia, this area in fact naturally continues to the Carpathian mountains and lowland Banat to the north, and the Oltenia plain to the south.⁷⁵ The quantitative, spatial, and topographic distribution of Coțofeni–Kostolac sites all point to a possibility of gradual seasonal movements of herdsman from lowland to highland areas, and vice versa (e. g. the Oltenia plain and the Danube's banks towards the mountainous hinterland).⁷⁶ In such a scenario, the utilisation of caves and cavelets is not surprising. Caves, often connected with open-air settlements of the Coțofeni–Kostolac group – as highlighted by authors⁷⁷ – were suitable for sheep herding, and offered shelter and protection, as well as stable temperatures during cold winter months. Additionally, caves within the karst relief possibly offered permanent sources of water and salt, necessary both for humans and animals.

Within the aforementioned territories, bearers of the Coțofeni–Kostolac group were partially omitted from the changes that occurred outside this area, which are marked as the beginning of the Early Bronze Age in the Central Balkans. Therefore, as suggested by A. Kapuran,⁷⁸ they could have continued their life based on mobile stockbreeding undisturbed up until the beginning of the Middle Bronze Age (c. 2000 BCE), when this territory became a focal point for the procurement and processing of copper and bronze. This is supported by an almost complete lack of Early Bronze Age sites within north-eastern Serbia. Al-

⁷⁵ Judging by the quantitative representation of sites, the territory of Oltenia, together with the Danube's right bank in Serbia, represents a lowland core of the Coțofeni–Kostolac group (highlighted in Fig. 1). According to C. Patroi, 223 sites attributed to the Coțofeni group are recorded in the territory of Oltenia (Patroi 2017).

⁷⁶ Капуран & Булатовић 2012, 70.

⁷⁷ *Ibid.*

⁷⁸ Kapuran 2014, 52.

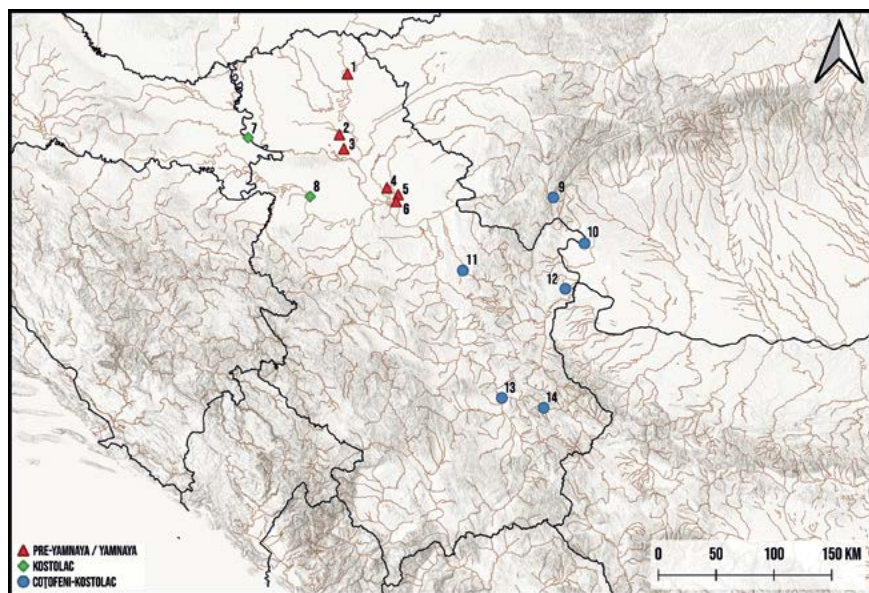


Figure 6. Absolutely dated sites mentioned in the text: 1. Padej “Humka u Barnahatu”; 2. Žabalj “Medisova humka”; 3. Šajkaš “Ciganska humka”; 4. Jabuka “Tri humke”; 5. Pančevo “Livade”; 6. Vojlovica “Rafinerija nafte”; 7. Vučedol; 8. Gomolava; 9. Băile Herculane; 10. Ostrovul Corbului; 11. Belovode; 12. Mokranjske Stene; 13. Bujanj; 14. Moiklište, Brzi Brod. (O. Mladenović).

though isolated,⁷⁹ the Coțofeni–Kostolac pastoral communities retained some contacts with the surrounding regions, which can be observed on their ornamental traditions within the ceramic inventory of the following Bujanj–Hum II group,⁸⁰ dated between the 28th and the 26th centuries BCE.⁸¹

The later phases of the Eneolithic in the Central Balkans inspired Nikola Tasić, member of the Academy, to provide a lasting narrative of significant changes that marked this period. He laid the foundations for

⁷⁹ However, the absolute dates for phase III of the Coțofeni group might also indicate the possibility of extended duration of the group up to the mid-third millennium BCE (Diaconescu 2020, 28–31).

⁸⁰ Bulatović & Milanović 2020, 224–226.

⁸¹ Cf. Bulatović & Vander Linden 2017, 1055–1057, Table A4; Bulatović, Gori & Vander Linden 2020, 243; Bulatović & Milanović 2020, 224.

our understanding of the fluctuant nature of the human past, and how precious knowledge of material culture can be for an archaeologist in search of answers.⁸² A quarter of a century later, armed with absolute dates, new interpretations, and exact physical and chemical analyses, we are still in pursuit of pieces of a puzzle he designed.

⁸² Tasić 1995.

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Miroslav Marić*

*Institute of Balkan Studies
Serbian Academy of Sciences and Arts
Belgrade, Serbia*

Tumuli of north Banat, sacral objects, territorial markers, and landmarks?

Abstract: The subject of this chapter is an interpretation of the spatial distribution of tumuli sites in the north Banat area of Serbia. The chapter focuses on issues of studying the spatial distribution of tumuli in comparison to landscape characteristics. The baseline model is constructed using topographic, pedological, and geological aspects of the landscape combined with the palaeohydrographic reconstruction in the examined area, and the population of the tumuli is used as a reference for the assessment of the random distribution of the tumuli. The chapter attempts to identify patterns in the distribution of tumuli against the period in prehistory.

Key words: Serbia, North Banat, tumuli, distribution, landscape, Copper Age, Bronze Age

Introduction

The area of northern Banat (Fig. 1) in the province of Vojvodina in northern Serbia has been well known by local archaeologists as the land of tumuli. Over multiple decades, archaeologists dealing with the area have mapped close to 250 tumuli in three municipalities: Novi Kneževac, Čoka, and Kikinda.¹ It is, beyond a doubt, safe to assume that even more tumuli existed in prehistoric periods but, over time, a certain amount fell to sediment exploitation, agricultural practices, and the development of settlements and infrastructure. Surviving ones still dot the landscape, and are a prominent feature in the area presented here.

* miroslav.maric@bi.sanu.ac.rs

¹ Трифуновић 2012; Трифуновић 2016; Трифуновић 2020; Girić 1994.

Tumuli, a type of burial practice most likely introduced into the Carpathian region at the end of the Copper Age with the members of the Baden culture complex,² came after a long period of cremation burials, themselves preceded by a practice of skeletal inhumations of the early Copper Age.³ The earliest practice of tumuli cremation burials during

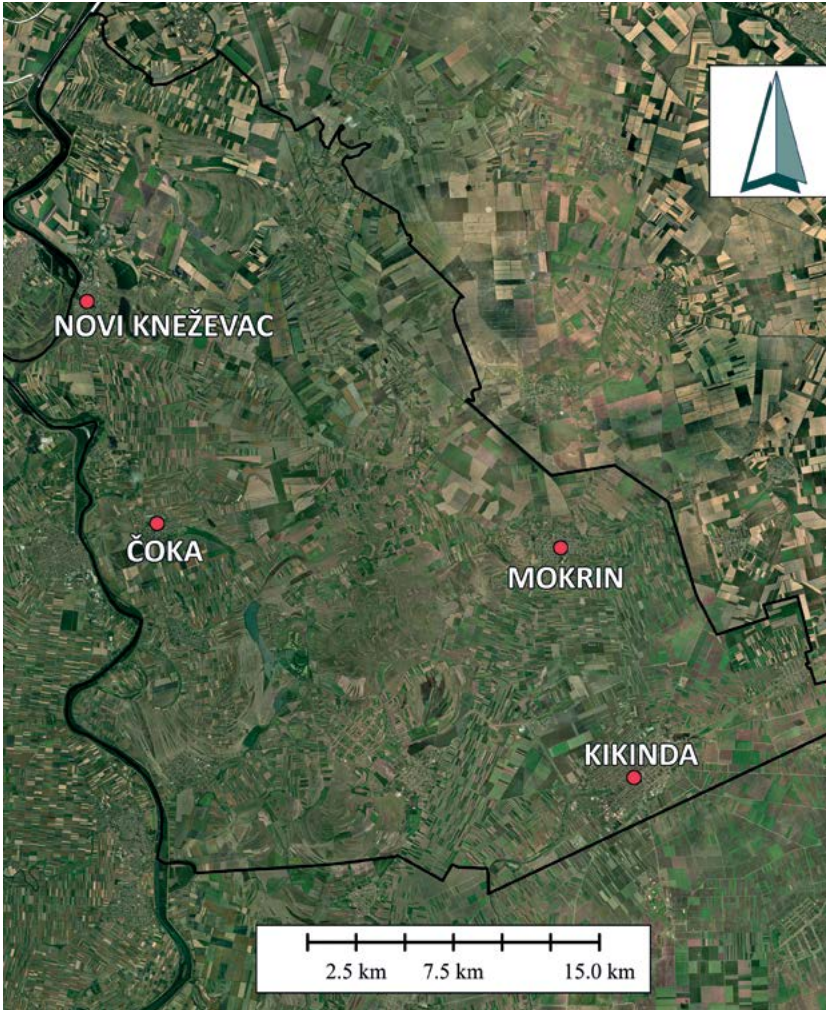


Fig. 1. Serbian North Banat.

² Sachsse 2012.

³ Tasić 1995, 23–24.

the middle Copper Age period (Baden Ia period) can be found on the western fringes of the Carpathian basin, where earthen burial mounds are found in the areas of Funnelbeaker culture on sites like Náměšť na Hané–Křemela I, Drahanovica, and Ludeřov.⁴ By the classical and late Baden period, the cemeteries are mostly of the settlement type, but sometimes burials can be found within settlements as well.⁵ The graves tend not to contain cremation burials, but rather inhumations, like the necropolis of Budakalász, which contains scant evidence of covering by stone packing or stone and earth fill.⁶

In the north Banat area of Serbia, the evidence of such burial practices in the classical and late Baden–Kostolac period is meagre. Arađanska mound near Mokrin (Mokrin 52 site) contained a cremation burial under a 50 meter diameter mound.⁷ Another mound, the so called Dilber mound south-west of Mokrin, surveyed by Milorad Girić in 1958,⁸ contained finds of the Baden–Kostolac culture as surface finds, but no burial was detected. Another mound, known as Slatina (salty) mound, excavated in 1928 and 1929 near Srpski Krstur, contained, in its central area, a layer of ash and burnt bones, together with a small biconical urn. This find was attributed to the period of transition between the Copper and Bronze Age,⁹ however, the corded impressions on the amphorae probably date it to the end of the fourth millenium BC.¹⁰ Another likely burial mound is the Barnahat mound where, during a field survey in 1958, Milorad Girić found fragments of Baden–Kostolac pottery in the mantle of the mound, however no *in situ* burial was discovered. Later excavations would discover only graves of the Yamnaya period.¹¹

During the survey of the Novi Kneževac municipality in 2007, a single mound, 35 by 15 meters in diameter, was detected (site 23), with several Baden–Kostolac–Coțofeni pottery fragments on the surface.¹² However, without archaeological excavations it can only be assumed that the

⁴ Baldia, Staeck, & Šmid 2001; Šmid 1990.

⁵ Sachsse 2010, 1:194.

⁶ Bondár & Raczky 2009, 238.

⁷ Girić 1987.

⁸ Барачки & Гирић 1975.

⁹ Надлачки 1950.

¹⁰ Włodarczak 2021.

¹¹ Girić 1987, 72–73.

¹² Трифунуовић 2012, 224–25.

mound contains a burial of the late Copper Age period. Several years later, in the course of the same survey project, two mounds in the neighbouring municipality of Čoka – one east of the village of Banatski Monoštor (site 41), the other north-east of Ostojićevo village (site 58) – were recorded as containing surface finds of the Copper Age period, but the author does not illustrate or date the finds.¹³ It is worth noting that both of these sites also contained pottery from other periods, Iron and Bronze Age respectively, thus the chronological attribution remains uncertain.

The evidence for Yamnaya period burials in Serbian northern Banat is quite sparse, and includes two graves from the Barnahat mound.¹⁴ The possibility that the Slatina mound was another burial of the same period is hypothesised by some authors,¹⁵ but as no inhumation burial with wooden construction was detected, this theory should perhaps be rejected in favour of a late Baden–Coţofeni period. Another possible Yamnaya period burial is found south of Novi Kneževac, on the Japina koliba site where, according to the report,¹⁶ a small mound was detected above a damaged loess mound (dune?), with a central grave that contained a wooden burial chamber 1.6 by 1.5 meters in size, with an inhumed individual placed on his back and legs elevated and contracted to the right. Traces of ochre and a white, lime-like material were discovered around the skeletal remains. Absolute radiocarbon dating of the Padej 2 grave (Bln-2219, 4320 ± 50) around 3000–2900 BC¹⁷ puts these graves into an early Yamnaya phase and directly comparable to the Ciganska Humka burial mound excavated on the opposite bank of the Tisza in Šajkaš.¹⁸

The Method and the Data

Having rather limited excavation and chronological data of the tumuli in the north Banat region, I had to resort to the use of statistical analysis and GIS to perform an analysis on possible regularities in the positioning of the tumuli. Using a chi-squared test with exact significance values, the

¹³ Трифуновић 2016, 96, 213.

¹⁴ Girić 1987.

¹⁵ Włodarczak 2021, 231.

¹⁶ Гиріћ 1994.

¹⁷ Girić 1987, 73.

¹⁸ Włodarczak 2021, tbl. 2.

null hypothesis for the basic model to be tested was that the frequency of tumuli within the studied region is not dependent on landscape characteristics, and does not show preference for certain areas based on their features. To further refine the model other limiting factors were introduced in the analysis, like the diameter of the tumuli. It has been noted that smaller tumuli tend to be a feature of earlier funerary practices of the fourth millennium BC, but also can appear in the funeral practices of the Yamnaya culture, where they represent a single-phase funeral mound.¹⁹ The extension of burial mounds in the region is not an unknown occurrence, either as an extension of Yamnaya burials over older mounds from earlier periods, or as an extension of single-grave Yamnaya burials into double burials at some later point in time. So far, no barrows with numerous burials are known in the north Banat area. In an attempt to simplify the analysis, the cut-off size of the mounds that separates the hypothesised late Copper Age mounds from early Bronze Age ones will be set to 40 meters in diameter, whilst the cut-off point on the upper end of the size spectrum will not be set, despite the possibility that some of the larger sites (100 meters in diameter, for instance) could be geological formations or even sentry mounds from a later period, constructed to oversee movement in the predominantly flat area of north Banat.

The data used was obtained from several different sources. The most important, archaeological data, originates mostly from the published results of the Archaeological Topography of Banat,²⁰ but also from the work of Milorad Girić,²¹ who was the first archaeologist in the region to map the majority of the tumuli by the 1970s, and excavated some of them as well. Owing to the nature of the systematic survey performed in the area, and the quantity of discovered sites from all periods, it is my strong belief that the observed frequencies of burial mounds in the examined area do not contain a sampling bias which could influence the results and obscure or enhance an existing pattern in the positioning of tumuli. It is however possible that a certain amount of smaller burial mounds was not detected, mostly due to modern agricultural techniques being implemented in the region, which have, over the past few decades,

¹⁹ Włodarczak 2021, 231.

²⁰ Трифуновић 2012; Трифуновић 2016; Трифуновић 2020.

²¹ Girić 1987; Гиріћ 1994.

led to the flattening of smaller mounds, making them more difficult to detect in the landscape.

The landscape layers used were created manually from digitised topographic, soil, and geological maps of the area, with an additional layer of palaeohydrological features identified from available satellite imagery, thus making possible a various GIS analysis based on multiple landscape features. It must be stated that the nature of the predominantly flat terrain in the examined area did not undergo significant alterations to its characteristics since the prehistoric period, and is a relatively truthful representation of the past landscape, until at least the onset of the Holocene. During the digitising process, modern features like levies, drainage channels, artificial lakes, and fisheries present in the region since the second half of the eighteenth century, when first reclamation projects were undertaken, were ignored in an attempt to produce the clearest possible surface model of the terrain, and prevent possible errors and biases. The use of soil and geological maps also infers that these particular features did not change since prehistoric times which, in most cases, must be held as a self-evident fact due to the very slow nature of soil generation and accumulation, often dependent on specific climatic and biological factors, and the stable nature of geological layers beneath the soil surface.

This being a premiere analysis of this type, it is possible that errors were made in the process, first and foremost in the area of chronological attribution of individual mounds, as for most there are no data due to the fact that they were either not excavated, or that no surface finds were detected during the survey. Further research will perhaps open new possibilities in the future, and enable more insight into the matter.

Results and Discussion

To start building the analysis, it is first necessary to test the simplest hypothesis, namely, are analysed tumuli in the north Banat area randomly placed, or does their positioning show affinity for certain landscape characteristics. To test the hypothesis, we chose two primary landscape characteristics to analyse. The first analysis performed was the position of tumuli in comparison to the soil type they are found on. The statistical significance of the differences between the observed and expected frequencies was tested using a χ^2 test with exact significance values, with the additional condition that not all tested categories are equal. This is import-

ant, as not all soil types are equally represented in the observed region; thus, each category of soil is assigned its percentage value of representation, calculated by dividing a particular category's area from the total area containing tumuli, and multiplying it with 100 to reflect percentage (Table 1).

Observed tumuli (N)	Soil Type	Percentage (%)
110	Chernozem	37.36528
32	Solonetz	12.95744
25	Haplic Vertisol	23.35415
20	Haplic Gleysol	11.45958
5	Solonchak	1.280553
54	Gleyic Phaeozem	13.583

Table 1. Soil type and observed number of tumuli.

The results of the chi-squared test indicate that the null model, that is, the initial hypothesis of tell distribution being random across the landscape, should be rejected, as at least two soil categories show significantly more tumuli being observed than expected at a statistically significant level ($\chi^2=38.036$, $df=5$, $p=0.000$), while another category has a slightly elevated number of observed tumuli (Table 2). The two categories of particular interest are gleyic phaeozem and chernozem soil, with a significantly larger observed population of tumuli, while solonchak has a slightly elevated observed number of tumuli than expected. If the soil area percentage is analysed, it is quite striking that two out of the three categories with noted difference between observed and expected number of tumuli jointly represent just 14.863% of the analysed area.

It must be stated that the author does not believe the prehistoric population of the region was able to detect soil differences by their chemical composition, but were rather able to distinguish better and poorer soil areas through the multigenerational continual use of the landscape in their immediate environment which, over time, led to the proxy determination of soil characteristics and usage options.

Tumuli vs Soil type	Observed N	Expected N	Residual
Chernozem	110	91.9	18.1
Haplic Vertisol	25	57.5	-32.5
Haplic Gleysol	20	28.2	-8.2
Gleyic Phaeozem	54	33.4	20.6
Solonetz	32	31.9	.1
Solonchak	5	3.1	1.9
Total	246		

Table 2. Observed and expected tumuli frequencies for different soil types in the north Banat area ($\chi^2=38.036$, $df=5$, $p=0.000$).

The second basic hypothesis to be tested can be summed up as: “Are tumuli randomly erected disregarding the terrain elevation, or is there a height preference present?” Similarly to the previous analysis, the same χ^2 is used, but this time the heights were subdivided into multiple categories (Table 3) of three meter wide elevation spans (except for the last value, which was six meters due to a small number of observed tumuli, which could lead to results being skewed if divided into two separate categories). The elevation values for the location of tumuli were derived from a DEM created of digitalised 1:25000 scale topographic maps of the region.

Terrain elevation (m)	Observed tumuli (N)	Area Percentage (%)
77.5–80.00	110	80.80
80.01–83.00	83	18.40
83.01–86.00	44	0.73
86.01–91.50	9	0.05

Table 3. Terrain elevation and observed tumuli number.

The landscape of the analysed region is dominantly flat, but certain areas are significantly lower than others, particularly parts of current and former courses of the Tisza and Zlatica rivers, which prominently meandered through the region until massive reclamation works were undertaken in the nineteenth and twentieth centuries. The reclamation result-

ed in the majority of their courses being straightened and channelled. The elevation difference ranges from 70.72 meters on the Tisza floodplain near Novi Kneževac, to 92.5 meters south of the village of Sanad. The largest observed frequency of tumuli lies in the 77.5–80 meter elevation category, which makes up 80.80% of elevation in the area.

The χ^2 analysis results show that the null hypothesis of randomness of tumuli positioning in regard to terrain elevation can be rejected, as the terrain elevation categories above 80 meters show a significantly increased frequency of observed tumuli on a statistically significant level ($\chi^2=1703.289$, $df=3$, $p=0.000$). Such an observation can be interpreted only as a preference for elevated positions, which would imply the intention for the tumuli to be seen in the landscape from as far as possible in the predominantly flat terrain of the Serbian Banat area.

Tumuli distribution vs Elevation	Observed N	Expected N	Residual
77.5–80.00	110	198.8	-88.8
80.01–83.00	83	45.3	37.7
83.01–86.00	44	1.8	42.2
86.01–91.50	9	1	8.9
Total	246		

Table 4. Observed and expected tumuli frequencies for different elevation categories in the north Banat area ($\chi^2=1703.289$, $df=3$, $p=.000$).

In order to attempt to estimate the positioning of tumuli by period, a separate layer of data was created, containing tumuli up to 40 meters in diameter, presumably more associated with the earlier, Late Copper Age traditions. Their positions, and the soil type underneath them, were recorded alongside the percentage that that particular soil type occupies in the analysed region (table 5).

Soil type	Observed tumuli (N)	Area coverage (%)
Gleyic Phaeozem	25	13.583
Haplic Gleysol	5	11.459
Haplic Vertisol	8	23.354
Solonchak	3	1.28
Solonetz	7	12.957
Chernozem	38	37.365
Total	86	

Table 5. Soil type and observed number of tumuli <40m in diameter.

Upon the establishment of tumuli frequency, the distribution was analysed with χ^2 as before, under the same preconditions. Unlike the primary analyses of tumuli distribution versus soil type, where the diameter was not a precondition, the result appeared somewhat different (Table 6).

Tumuli R<40m vs Soil Type	Observed N	Expected N	Residual
Chernozem	38	32.1	5.9
Haplic Vertisol	8	20.1	-12.1
Haplic Gleysol	5	9.9	-4.9
Gleyic Phaeozem	25	11.7	13.3
Solonetz	7	11.1	-4.1
Solonchak	3	1.1	1.9
Total	86		

Table 6. Observed and expected tumuli frequencies for tumuli under 40 meters in diameter in respect to the soil type ($\chi^2=30.735$, $df=5$, $p=.000$).

The χ^2 analysis shows a statistically significantly larger than expected values in only two soil classes, the chernozems and gleyic phaeozems, with a third class (solonchak) also showing values above expected; however, due to a small number of observed tumuli in this soil type, the expected values for solonchak can be treated as somewhat dubious. While the difference between observed and expected frequencies of tumuli has

somewhat decreased for chernozem soils, the same cannot be said for the gleyic phaeozem soils where it remains strong. However, it can be observed that there is no significant difference between this analysis and the initial one, where the diameter of tumuli was not treated as a key factor. Perhaps, such data is the result of a certain proportion of later period tumuli falling into the category as outliers, but it is also possible that no particular pattern of tumuli positioning can be identified in the Late Copper Age period in north Banat.

If old maps of the north Banat area are observed, and the First military survey of the Hungarian Kingdom (performed between 1782 and 1785) can be taken as a perfect example for this task, it is easy to notice a pattern of mounds erected on the edges of elevated ground, as if enclosing the area in-between. One such pattern can be observed near the modern-day village of Crna Bara, where the First military survey map shows no less than fifteen mounds surrounding the plateau west of the village (Fig. 2), while another can be found around the present-day village of

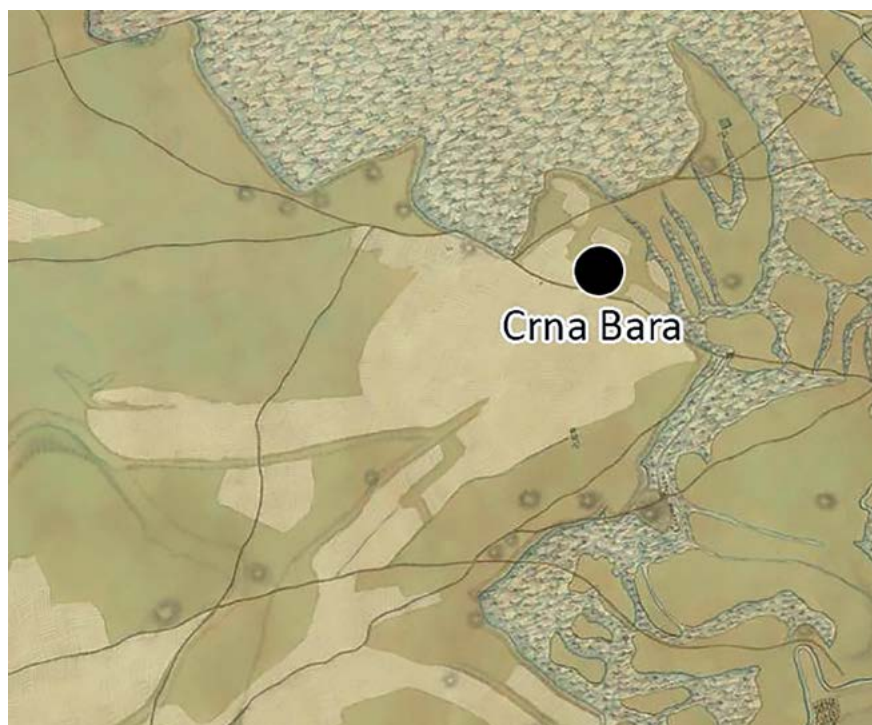


Fig. 2. Tumuli around Crna Bara marked on the First Military Survey Map.



Fig. 3. Tumuli around Djala marked on the First Military Survey Map.

Đala, where mounds border both the low wetlands east of the village, but also appear to form a perimeter towards the south-west on the elevated part of the plateau (Fig. 3). Even though not much is known of the period of these mounds, and some of them are not even visible in the terrain anymore due to modern agriculture (e. g. of the seventeen mounds visible on the First military survey maps of Đala, only eight were recorded during a recent survey), it appears almost impossible that their positioning is accidental.

Attempting to clarify this problem and determine whether tumuli were also perhaps used as territorial marks or landmarks, another approach was tested in the GIS software. In the northern Banat area of Serbia, the systematic survey, conducted during the “Archaeological topography of north Banat” project, identified sixteen sites containing surface finds attributable to the late Copper Age.²² The majority of the sites were detected in the southern part of the area presented here: in the Padej, Sajan, Mokrin, Idoš, and Kikinda municipalities (12). It is beyond a doubt that these sites, in their role of settlements, utilised a certain portion of space, called territory, which marked the spatial extent of their area of influence. Spatial analysis in archaeology, for the better part of the last fifty years, has studied this concept of spatial reasoning in an attempt to recreate territorial boundaries of political, economic, or other types of interest.²³

²² Трифуновић 2012; Трифуновић 2016; Трифуновић 2020.

²³ Stančić et al. 1994; Conolly & Lake 2006; Ducke & Kroefges 2008.

In the landscape examined here it is easily discernible that, aside from the Tisza, at the western boundary of the area three other, smaller rivers define the landscape. In the far north-east of the area, Nagy Ér – once a western tributary of the Maroš river meandering from Kis Szombor to Novi Kneževac where it met the Tisza – formed a regional corridor connecting two major river routes of the region. Today, the river is mostly channelled and incorporated into the Danube–Tisza–Danube drainage system.

Further to the south the Zlatica (also known as the Arany or Aran-ka) river, another left tributary of the Moriš (Maroš) originating near the village of Sânpetru German in Romania, meanders for over a hundred kilometers across the northern Banat area, until it drains into the Tisza near the town of Padej in Serbia. In its lower course, the Zlatica created a wider floodplain etched into the abandoned Pleistocene meander of the Tisza. This area, a natural barrier of seasonally and permanently waterlogged terrain, influenced the positioning of sites and tumuli profoundly.

Finally, in the southern portion of the examined area, the Galadska river (Galațca in Romanian), a palaeostream of the Pleistocene Moriš (Mureș) river, forms the third barrier, again in the direction of north-east to south-west. While it also formed a floodplain, it is the least pronounced one of the three, as it did not collide and join with any of the Pleistocene meanders belonging to the Tisza river course. Today, the Galadska river is non-existent, as the nineteenth-century reclamation, levy construction, and meander cutting blocked off the water influx into the old riverbed.

Plotting the positions of the late Copper Age settlements and burial mounds of under 40 meters in diameter (Fig. 4) against a digital elevation model of the area illustrates the spatial subdivision of the Serbian north Banat area based on these three floodplains and the Pleistocene Tisza river meanders. This is particularly visible in the central area, focused on the Zlatica floodplain between the villages of Padej and Sajan. A recent study in the Romanian part of Banat, directly abutting the area studied here, showed heavy reliance on the river valleys and the adjoining floodplains and marshes for human inhabitation in the prehistoric period.²⁴ It is then not surprising that we can identify three clusters of Late

²⁴ Micle 2016.

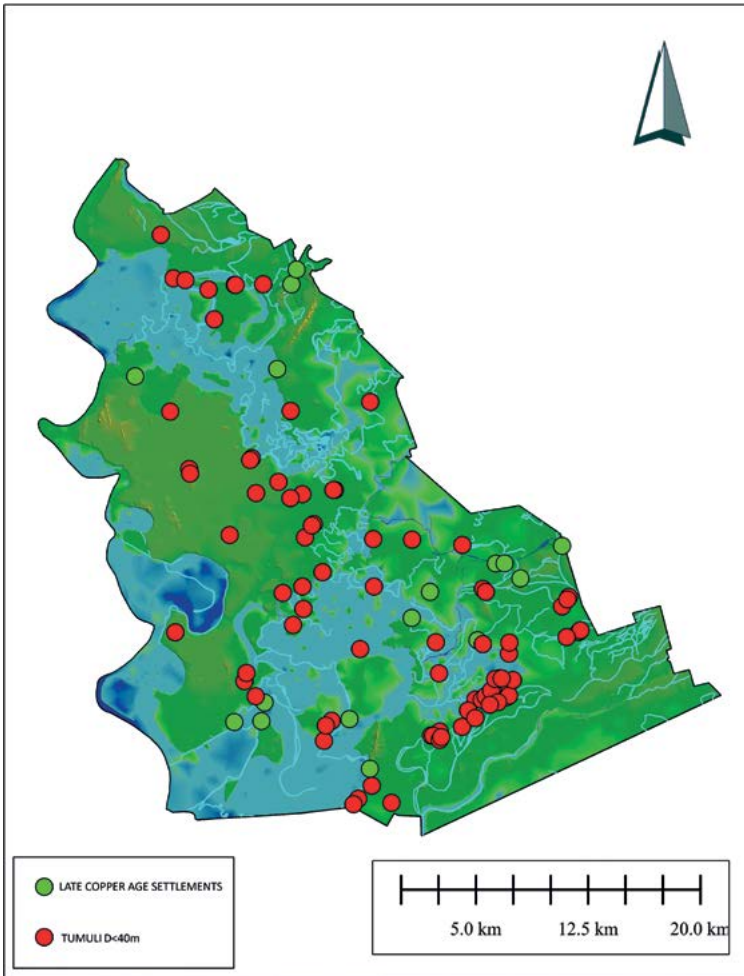


Fig. 4. Late Copper Age settlements and tumuli with $D < 40\text{m}$ in North Banat.

Copper Age settlements in Serbian north Banat (Fig. 5): one in the north-east area close to the modern settlement of Majdan; the second in the south-east, focused around the modern-day village of Mokrin; and the third in the south-west, between Padej and Sajan. Around those settlement clusters appears a significant number of burial mounds. One of the methods we can use to analyse the relationship between the settlements and the burial mounds is to employ the method of viewshed anal-

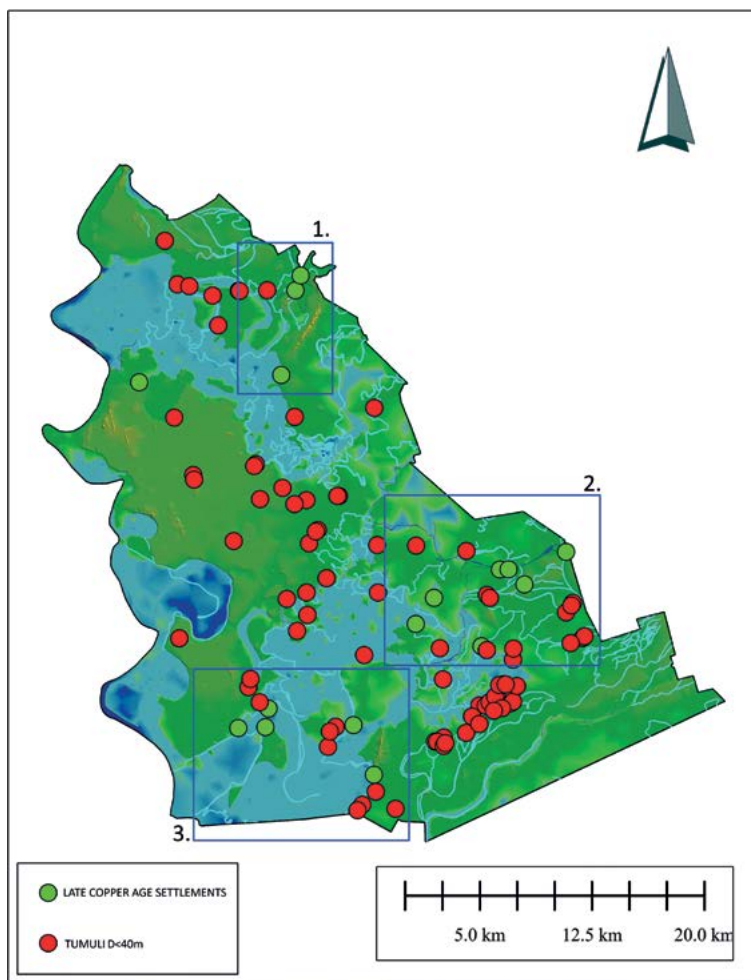


Fig. 5. Grouping of Later Copper Age settlements.

ysis, which is today widely accepted by the archaeological community.²⁵ Viewsheds are areas surrounding the selected location in the study area that are visible from the chosen location, but also vice versa. Viewshed analysis can help provide a better understanding of visibility in the landscape, but can also, as a proxy, help determine possible areas of interest

²⁵ Wheatley & Gillings 2002; Lake & Woodman 2003; Gillings 2015; Jones 2006.

and interactions within the landscape. The viewshed analysis tool is a standard feature in all complex GIS platforms and works within an identical framework. The tool uses a provided Digital Elevation Model and the geomorphology of the terrain to determine the visibility of specific portions of the landscape. It can be provided with a specific subset of values to further narrow down the modelling of visibility, such as the elevation of the viewer, and the viewed which, in our particular case, is the estimated elevation of a person standing, and the estimated height of the tumuli being observed. View radius and Earth curvature are another set of values that can be integrated into the viewshed analysis to create realistic areas of visibility, as the Earth's curvature on flat terrains limits the viewing distance to about a five kilometer radius, if observed with the naked eye in ideal atmospheric conditions.

In the analysis performed in the north Banat area, 1.6 meters was chosen for the viewer elevation, 3 meters was the set elevation of the tumuli, even though taller tumuli were registered as well, and a radius of 5 kilometers was set as a maximum view radius from the selected location, taking into account that at about 5 kilometers distance is the point at which the Earth's curvature bends away so that even the ideally flat terrain surface is no longer in view. Individual viewsheds were created for each of the sites in the three identified clusters, and a separate viewshed was created for the site of Jamure, east of Novi Kneževac, which did not belong to any of the clusters. While the viewshed analysis cannot account for the change in vegetation in the landscape through time, it is generally considered that the palaeo-vegetation of the area was not very wooded in the Copper Age, with pronounced anthropogenic pressure on the landscape cover towards the end of the period leading to a more open space landscape.²⁶

The viewshed analysis of cluster 1 shows only four tumuli under 40 meters in diameter being in the 5 km radius visibility area of the three known sites (Fig. 6). Only the westernmost tumuli (Banatsko Arandelovo 2 and 3) lie close to the edge of the visibility radius, at about 4 kilometers from the Majdan 29 site.

Analysing the viewsheds of cluster 2, centred around the Zlatica (Aranka) river floodplain (Fig. 7), it can be seen that the western part of

²⁶ Gumnior & Stobbe 2021, 56–57.

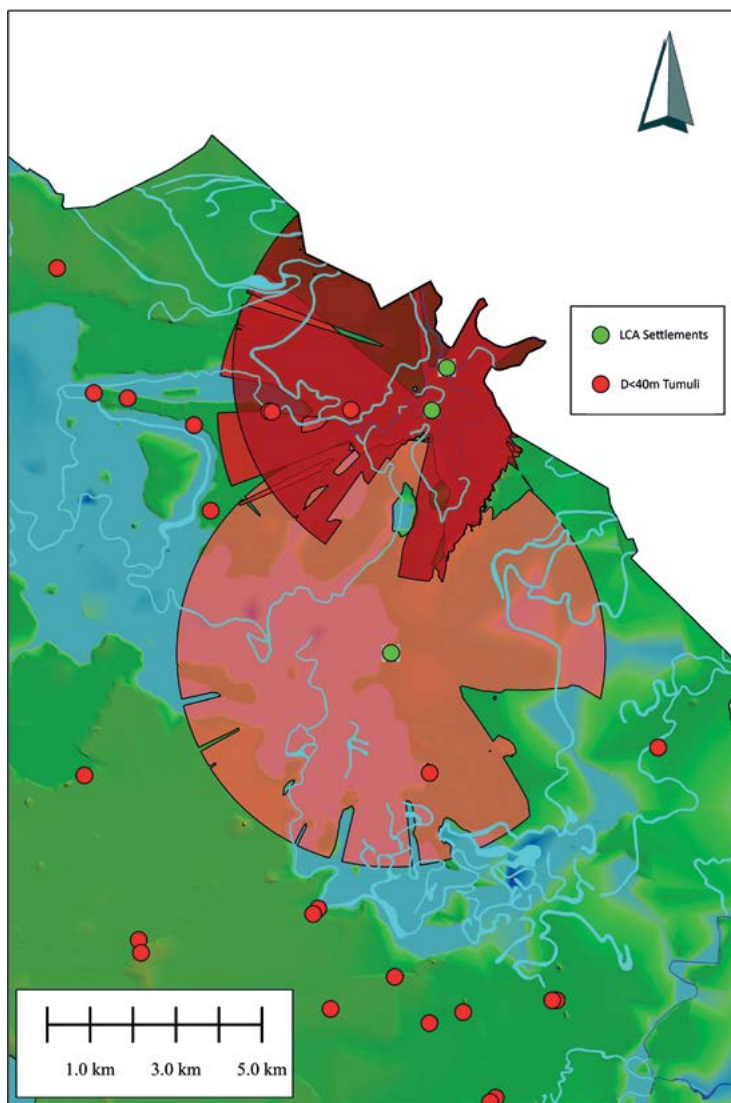


Fig. 6. Viewshed analysis of Group I settlements.

the cluster – the sites of Barnahat (30), Katahat (70), and Padej (68) – have a group of three mounds in the north-western area, all falling within the 5 km radius of visibility, and are visible from all three sites, whilst to the east only the sites of Barnahat and Katahat can see mounds on the

outskirts of the modern-day village of Sajan. It is interesting to note that these mounds are almost ideally at the 5 km visibility radius from these two sites. Furthermore, it is interesting that the view from the Barnahat site towards the south is obscured by a large tumulus that possibly originated in the late Baden age, but was later reused in the Yamnaya period, leaving no traces of the earlier burial (not included in the analysis for that reason). Examining the viewsheds of the eastern two sites in the cluster, Sajan 20 and Idoš 91, it can be seen that the Idoš 91 site has an overview of the largest quantity of mounds in this area (Fig. 8) – a total of ten, with four more just slightly out of the five kilometer radius set in the analysis. The Sajan 20 (or Sajan–Kermenjak) site has a direct view of five mounds, with two more just slightly beyond the established boundary. Another interesting phenomenon is that the three Sajan mounds (13, 15, and 24) are roughly between the Katahat and Barnahat sites of the western group, and the Sajan 20 and Idoš 91 sites of the eastern group, and could truly represent a boundary marker between these settlements in the late Copper Age.

Finally, the viewshed analysis of the third cluster, consisting of seven sites centred on the plateau between the Đukošin canal and the village of

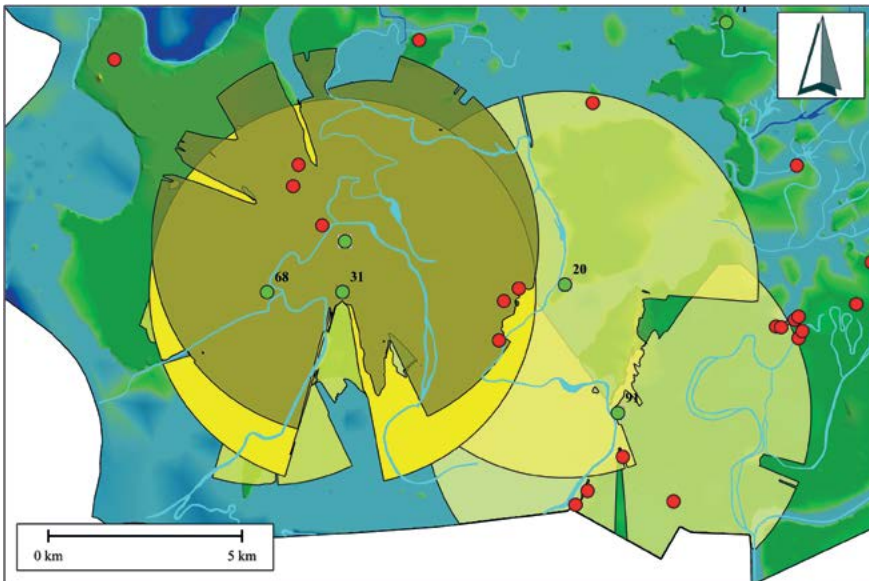


Fig. 7. Viewshed analysis of Group 2 settlements.

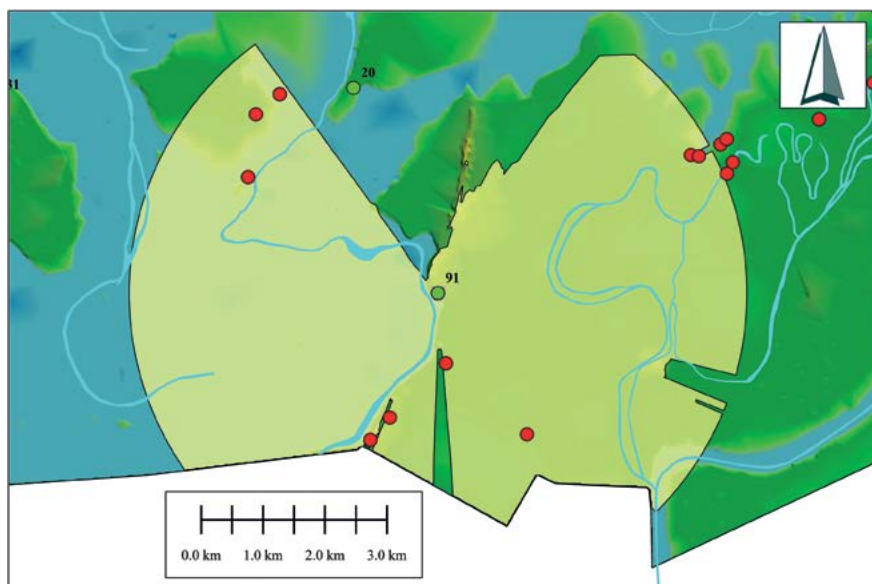


Fig. 8. Viewshed analysis of Idjoš 91 settlement.

Mokrin in the north, and the valley of the now non-existent Galadska river (Fig. 9), it immediately comes into view that a large number of tells exists immediately north-west of the town of Kikinda, abutting one of the former beds of the Galadska river, which could indicate its position in the prehistoric period. This area is dotted by no less than 23 mounds of under 40 meters in diameter, which is the largest concentration in the presented region. This large concentration can be observed from the site Mokrin 98, which also contains a mound known as Dilberova Humka (Dilber's mound), where Milorad Girić, during the 1958 survey, recorded finds of the Late Copper Age Baden period and the Early Bronze Age.²⁷ Dilber's mound itself was not included in the analysis, as its current diameter is close to 100 meters, which would indicate a later enlargement, possibly during the Yamnaya period.

Further north-east, around the village of Mokrin, there are three relatively close sites of the late Copper Age period (Mokrin 4, 21, 210). It is quite possible that the latter two – 21 and 210 – due to their proximity, are part of the same site, being only about 500 meters apart. In the view-

²⁷ Барачки & Гиріч 1975, 36.

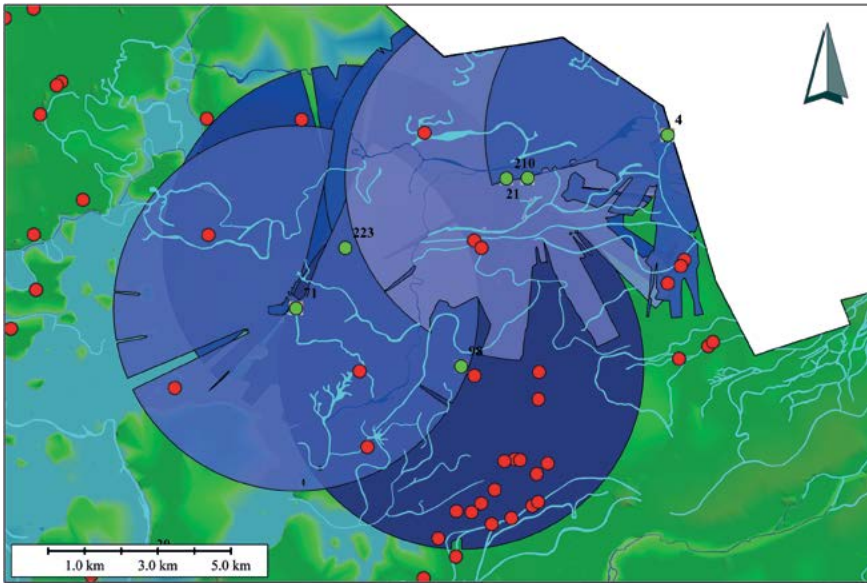


Fig. 9. Viewshed analysis of Group 3 settlements.

shed analysis of these sites it is noticeable that only the south-east group of mounds is visible to all three sites of the area, and are at the 5 km radius value. It is also worth noticing that all of the sites have a good overview on the Arađanka mound, excavated in 1961, when a Baden period urn was discovered in the middle of the mound. However, the same site also contains an inhumation burial linked to steppe communities,²⁸ and is over 100 meters in diameter, possibly due to this later enlargement, and is excluded from this analysis. Towards the west, Mokrin 21 and 210 overview a further three mounds which fall well within the 5 km set visibility boundary.

Of particular interest is one of the few excavated Late Copper Age sites in the area, site Mokrin 71, also known as Popin Paor. Multiple excavation seasons throughout the twentieth century revealed settlement remains from the Baden, Moriš, and Early Iron Age periods.²⁹ As can be seen from the viewshed analysis of the site, eight mounds are visible from the site, out of which six lie on or close to the 5 km visibility radius (Fig.

²⁸ Girić 1974, 74; Włodarczak 2021.

²⁹ Грбић 1939, 56–57; Гарашанин & Гарашанин 1951, 81.

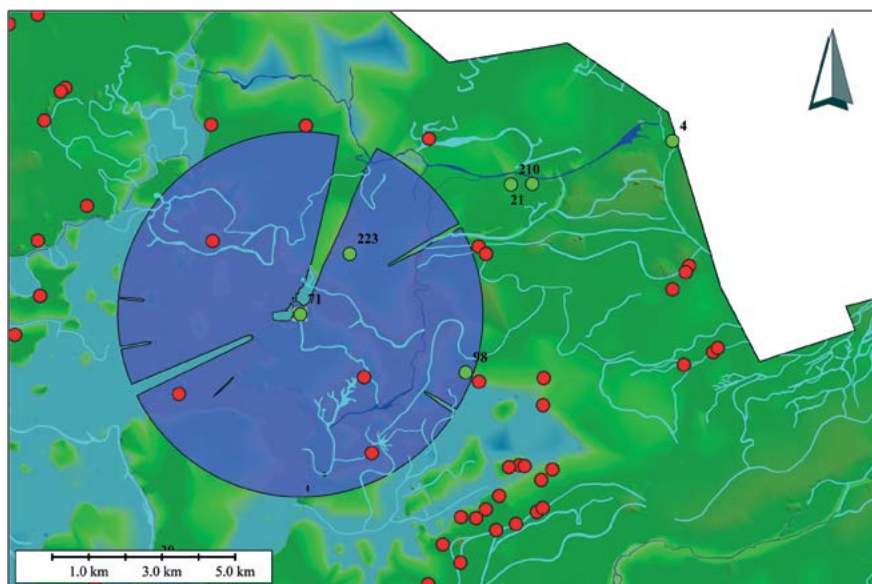


Fig. 10. Viewshed analysis of Mokrin 71 (Popin paor) site.

10). Such a disposition would make them good candidates for territorial markers associated with the site. One of the mounds, Sajan 25, is also located at the very edge of the 5 km view radius of the site Sajan–Kermenjak (Sajan 20) from the second cluster of sites, further strengthening this theory. It can be argued that the Mokrin 223 site presents a similar case – it also has an excellent overview over seven tumuli in the 5 km view radius, with another three immediately on the outside of this range. Sadly, as site 223 is only known from scarce surface collection items (one Baden style cup), and was partly destroyed by sand exploitation in the modern period, its true nature and extent can only be presumed.³⁰

The analysis of tumuli larger than 40 meters in diameter is more problematic. In the analysed area, 146 such tumuli have been recorded (Fig. 11), out of which sixteen can be attributed to the period of the Bronze Age, based mostly on sporadic surface finds of pottery,³¹ and one to the Yamnaya period (Barnahat mound). If mound diameters can be assumed as the basis for attribution to the Yamnaya period, as a potential

³⁰ Трифуновић 2020, 1:227.

³¹ Трифуновић 2012; Трифуновић 2016; Трифуновић 2020.

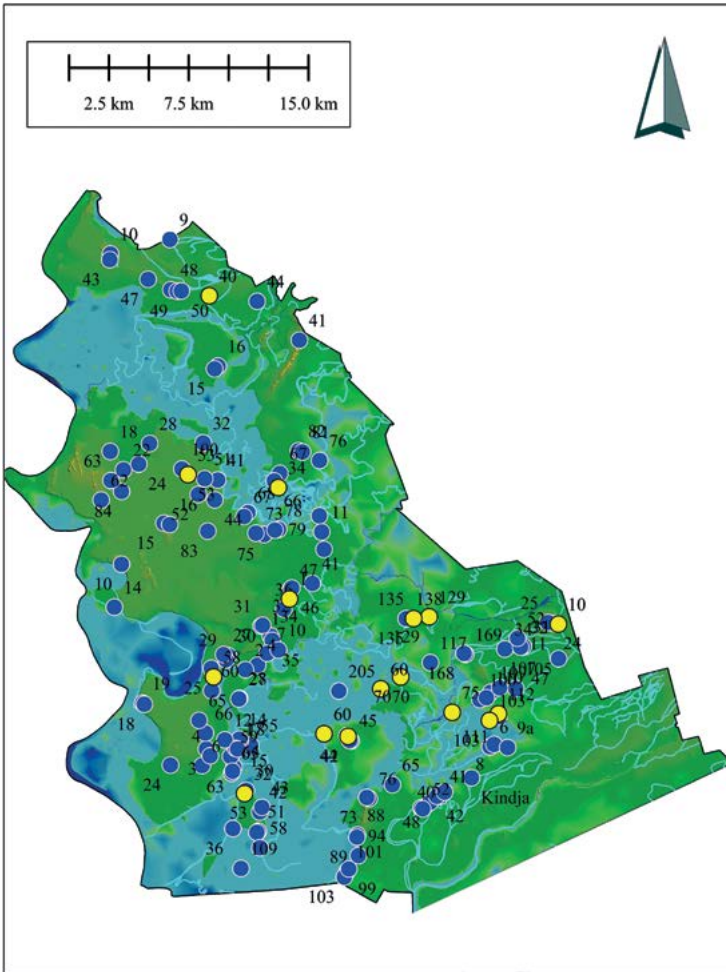


Fig. 11. Location of tumuli with $D > 40\text{m}$ (yellow marked belong to Bronze Age period).

method for a chronological attribution,³² then the diameter span can be set to larger than 40 and no smaller than 60 meters (larger tumuli are most likely ones that have undergone extension in a later period of use). Furthermore, thirteen additional tumuli can be dated to other periods and can also be removed from the analysis. Following the filtering, 100 tumuli remain for our current analysis. However, even with this revised

³² Włodarczak 2021, tbl. 1.

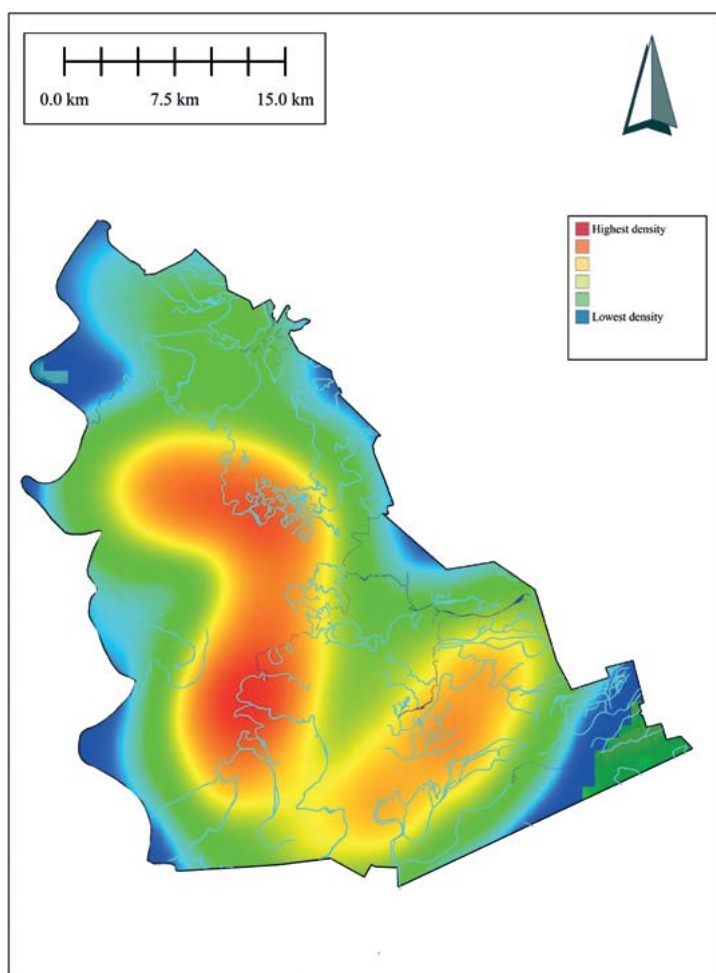


Fig. 12. Density mapping of Bronze Age tumuli with $D > 40\text{m}$.

number, another problem remains: the general lack of Yamnaya period settlements in the area. Thus, using viewshed analysis is not possible on these tumuli, and instead another method can be applied to estimate possible areas of interest in the landscape: their grouping. Density mapping uses Kernel Density metric distances between points of interest, as an estimation for density probability of analysed features and, as such, is one of the possible approaches to spatial cluster analysis.³³ Using KDE

³³ Baxter, Beardah & Wright 1997.

for density mapping, the analysis indicated three larger areas of intense concentration of tumuli (Fig. 12) fitting the criteria. Two of the three regions are centred around the Zlatica river floodplain and the Tisza Pleistocene meander in the central part of the analysed region, while the third region is formed around the very deep Pleistocene meander of the Tisza that formed north of Novi Kneževac, and extended towards the village of Crna Bara over 20 kilometers away from the present course of the river.

Conclusion

The Serbian north Banat area represents a region of particular interest for prehistoric research. Its position and geomorphology, influenced by the river Tisza and its tributaries, has made it a liminal area between major communication arteries of the south-eastern Carpathian basin. Archaeological research in the area shows human occupation from the earliest of periods, but also evidence of intense migration of not just people but also ideas, goods, and material culture. Being exposed to different influences in various periods of prehistory, Serbian Banat is a melting pot of various traditions, including burial rites. It is then not surprising that excavated necropoleis show the presence of various modes of burials, often appearing together in one necropolis.

Tumulus burial, a particular mode of burial that requires a joint effort in construction and use, is very present in the north Banat area, with over 250 tumuli still visible today, and offers a visible indicator of human presence in a predominantly flat landscape. A notion of a tumulus, a protruding artificial mound as a monument, a boundary, or territorial marker, is not unknown in archaeology. It is understood that tumuli as monuments can promote notions of identity, time, and place³⁴ for the living, even though originally erected for the dead. Having such a lasting presence, the tumuli become a part of the social memory in the region, but also can evoke social practices by the indigenous people. It is then not far-fetched to envisage these markers as points in the landscape where something may be stopping or something else beginning, such as the influence of a settlement (or a group of settlements), or perhaps the territory they control or exploit in their everyday practices. Having individual burials

³⁴ Goldhahn 2008.

inside in most cases, the Copper and Bronze Age tumuli of northern Banat cannot be considered as multigenerational in most cases, unlike those found in the later Bronze period in central Serbia for instance.³⁵ Individual burials could indicate the importance of the person buried in the mound, with a possible connection to the landscape, or a memorable event in the landscape. The effort required for construction of the mounds corroborates the proposition of an individual with importance.

Statistical and GIS analyses employed in this paper indicate that a certain preference for the location of tumuli always existed, with gleyic phaeozem and chernozem soils being preferred much more over other soil types in the region. The chemical composition and characteristics of these particular soil types make them the most fertile soil in the studied area for cultivation and cattle grazing, which is especially important in such a dynamic surrounding as the landscape of the Serbian north Banat is, heavily influenced by seasonal and permanent ground and subterranean water. Another analysed characteristic, the elevation of the tumuli, again showed that in the predominantly flat terrain of Banat, tumuli builders preferred elevated areas to erect tumuli, likely in an attempt to make them more visible in their surroundings. Putting the visibility aspect of the tumuli to the test, GIS viewshed analysis confirmed that certain tumuli are visible from more than one site, indicating their possible role as landscape markers associated with some function, be it territorial, boundary, or social memory. However, further analysis and especially more excavated tumuli in the region are needed for a better definition of the function and the chronology of the tumuli, which are, even today, ever present in the landscape, despite millennia of landscape alteration and human intervention.

³⁵ Никитовић, Стојић & Васић 2002; Филиповић 2009.

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Viktor I. Klochko*

*National University of “Kyiv-Mohyla Academy”
Kyiv, Ukraine*

Vinča–Altheim type metal flat axes as markers of cultural processes in Eastern Europe during the fourth–second millennia BC

Abstract: The spreading of advanced pastoral-agricultural economy throughout the forest zone of Eastern Europe is still studied rather poorly. The appearance of Vinča–Altheim type metal flat axes in Ukrainian territory is linked to migrations from Central Europe during 3600/3500–3350/3300 BC. The migrants participated in forming the Sopiivka group of Late Trypillia in the Middle Upper Dni-pro region, which is linked to the appearance and the spread of agriculture and cattle-breeding, as well as cremation burials, to the Forest zone of Eastern Europe. I link the findings of Vinča–Altheim type flat axes to this cultural group. As the result of this research, the progress in habitation of north-eastern Ukraine during the fourth to first millennia BC becomes clear to us. Metal flat axes of the Vinča–Altheim type appear to be the markers of cultural processes of the Eneolithic–Bronze ages, from the Sopiivka group of Late Trypillia to the Middle Dni-pro and Sosnytsia cultures.

Key words: Eastern Europe, Eneolithic Age, Bronze Age, Vinča–Altheim type metal axes, cultural processes’ markers

The spread of the advanced pastoral-agricultural economy throughout the Forest zone of Eastern Europe is still studied rather poorly.¹ The appearance of Vinča–Altheim type metal flat axes, also known as the Petrești version of axes,² in Ukrainian territory is linked to migrations from Central Europe during 3600/3500–3350/3300 BC.³ The migrants participated in forming the Sopiivka group of Late Trypillia in

* vklochko@ukr.net

¹ Koško & Klochko 1994.

² Vulpe 1974, 41–42.

³ Klochko et al. 2020, 21–31; Klochko & Koško 2020.

the Middle Upper Dnipro region, which is linked to the appearance and the spread of agriculture and cattle-breeding, as well as cremation burials, to the Forest zone of Eastern Europe.⁴ I link the findings of Vinča–Altheim type flat axes to this cultural group, however mapping these items shows a wider region of their spread – far beyond the usual “Sophiivka” territory (Fig. 1).⁵

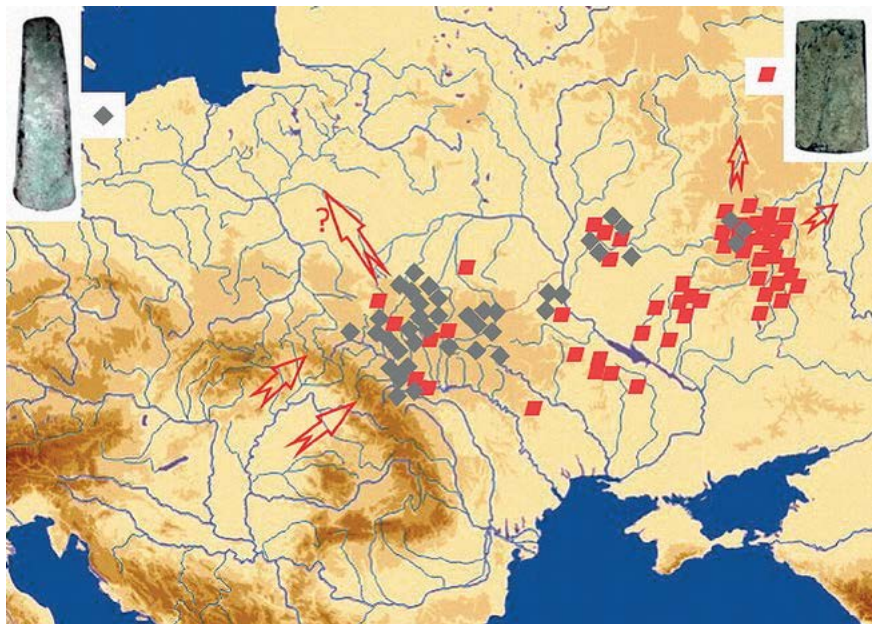


Fig. 1. Map of axe-hammers of Remedello–Bityn and Vinča–Altheim types found in Ukraine (Klochko at al. 2020).

While studying the Vinča–Altheim type axes from the Chernihiv, Sumy, Poltava, and Kharkiv regions of Ukraine, I singled out a group of findings which are smaller, have perfectly straight side edges and polished surfaces, which is common for items cast in stone moulds made of talc-amphibole shales. Spectral analysis shows that most of them are made of classic Sn-bronze. All of it allows me to attribute them to the later period.⁶ An example of this is the axe from the village of Rybalske,

⁴ Koško & Videiko 1995.

⁵ Klochko at al. 2020, 21–31.

⁶ Klochko at al. 2020, 21–31.

Okhtyrka district, Sumy region (Fig. 2).⁷ Such metal content and crafting technology are common for the local (so-called “Loboikivka”) metallurgy of the Late Bronze Age.⁸ This means that they indicate the existence of such axes in this region up until the first half of the second millennium BC. However, the absence of complex findings had previously complicated their dating.

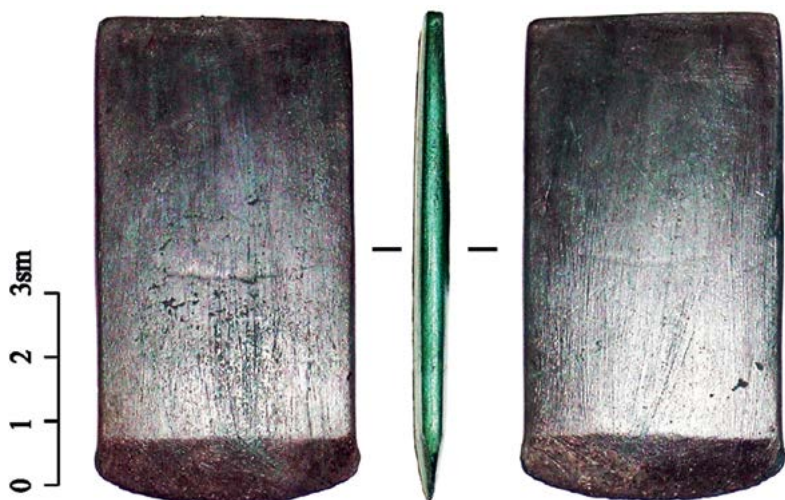


Fig. 2. Axe from the Rybalske village (Клочко & Козыменко 2017).

The situation had changed in 2022, with the bronze hoard from the Sumy region (Fig. 3).⁹ The hoard includes a large “Early Zrubna” type sickle (1), a Holovuriv type spear (2), a late variant of a Vinča–Altheim type flat axe-adze (3), and a knife (4).

The sickle, the spear, and the knife are identical to items cast in the moulds of the so-called “casting workshop”, which were found on a Late Bronze Age settlement site near Holovuriv village, Boryspil district, Kyiv region (Fig. 4).¹⁰ A similar spear and dagger were found in a Sosnytsia

⁷ Клочко & Козыменко 2017, I.4.15.

⁸ Klochko 1998, 48–73.

⁹ <https://violity.com/ua>, online 11.02.2022.

¹⁰ Klochko 1998, 49–55, Fig. 2–4.



Fig. 3. Sumy hoard of 2022.

culture burial near the village of Kvetun, Briansk region, Russia (Fig. 5).¹¹ For a long time, the cultural affiliation of these complexes, assigning them either to the Sosnytsia or to the Zrubna culture, was a subject of discussion.

The new finds of Holovuriv type spears provide new information which can help answer this question. Such items come from the Sumy region (Fig. 6, 1–5);¹² the “Petrovske” hoard from Petrovske village, Kamianka district, Cherkasy region (Fig. 6, 6);¹³ the Sumy region (Fig. 6, 7–9);¹⁴ the village of Berezan, Kyiv region (Fig. 6, 10);¹⁵ the Kyiv region (Fig. 6, 11);¹⁶ the Cherkasy region (Fig. 6, 12);¹⁷ the Poltava region (Fig. 6,

¹¹ Klochko 2001, 235; 241, fig. 93,4; 97,4.

¹² <https://violity.com/ua>, online 06.10.2016; 17.01.2017; 31.01.2017; 09.02.2019; 16.11.2019.

¹³ Ключко & Козыменко 2017, 4-1.4.2.

¹⁴ <https://violity.com/ua>, online 23.11.2019; 06.06.2020; 17.07.2018.

¹⁵ <https://violity.com/ua>, online 09.02.2023.

¹⁶ <https://violity.com/ua>, online 14.03.2014.

¹⁷ Ключко & Козыменко 2017, 4-1.4.30; an. 789.

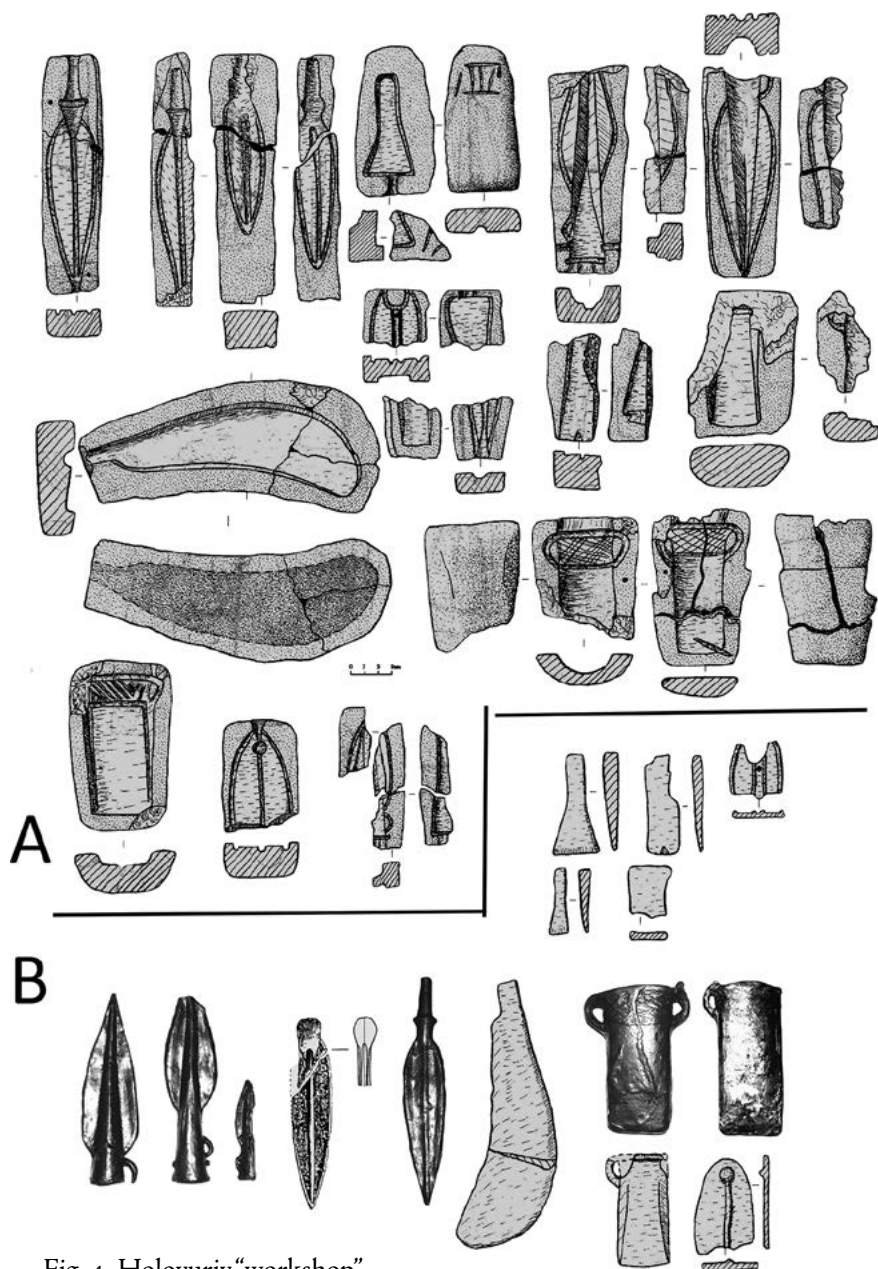


Fig. 4. Holovuriv "workshop".

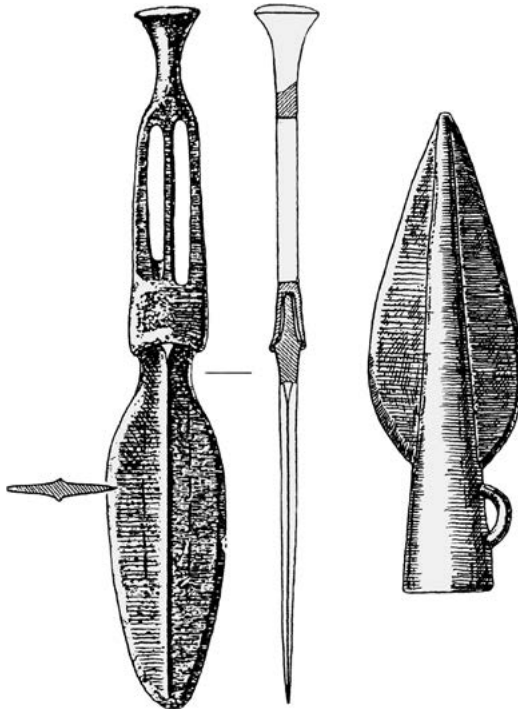


Fig. 5. Items from the burial near Kvetun village.

13);¹⁸ the city of Poltava (Fig. 6, 14);¹⁹ the Cherkasy region (Fig. 6, 15);²⁰ the village of Kvetun, Briansk region, Russia (Fig. 6, 16).²¹

The mapping of these finds shows the area of their spread (Fig. 7), which mostly coincides with the area of the late variant of Vinča–Altheim type axes (Fig. 1): north-eastern Ukraine. In the first half of the second millennium BC, this region was occupied by the Sosnytsia culture, which had both cremation and inhumation rites, and the Marianivka culture. These cultures formed upon the Middle Dnipro Corded Ware culture, in the creation of which the Sophiivka group of late Trypillia had

¹⁸ <https://violity.com/ua>, online 03.02.2021.

¹⁹ <https://violity.com/ua>, online 04.04.2017.

²⁰ <https://violity.com/ua>, online 08.03.2021.

²¹ Klochko 2001, fig. 93, 4.

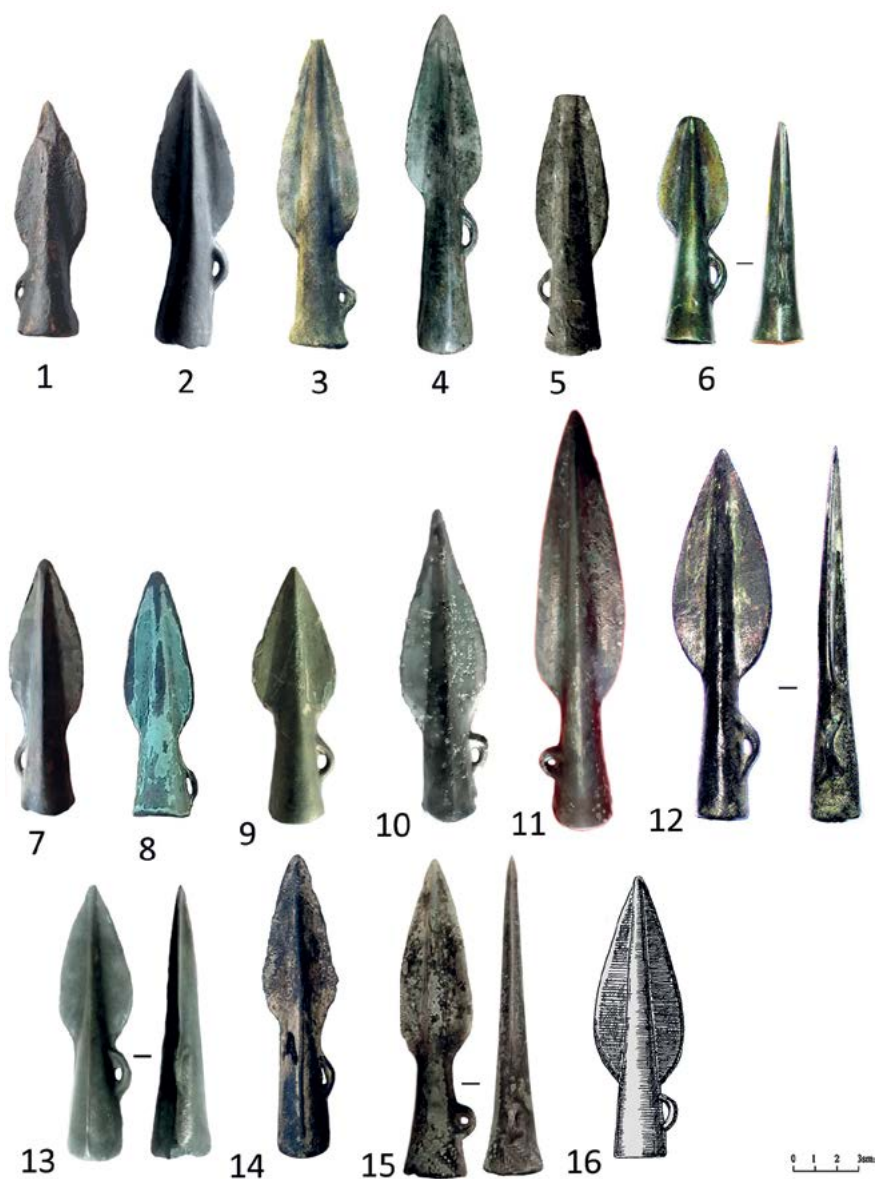


Fig. 6. Holovuriv type spears: 1–5. Sumy region; 6. Petrovske hoard (Клочко & Козыменко 2017); 7–9. Sumy region; 10. Berezan; 11. Kyiv region; 12. Cherkasy region (Клочко & Козыменко 2017); 13. Poltava region; 14. Poltava; 15. Cherkasy region; 16. Kvetun (Klochko 2001).

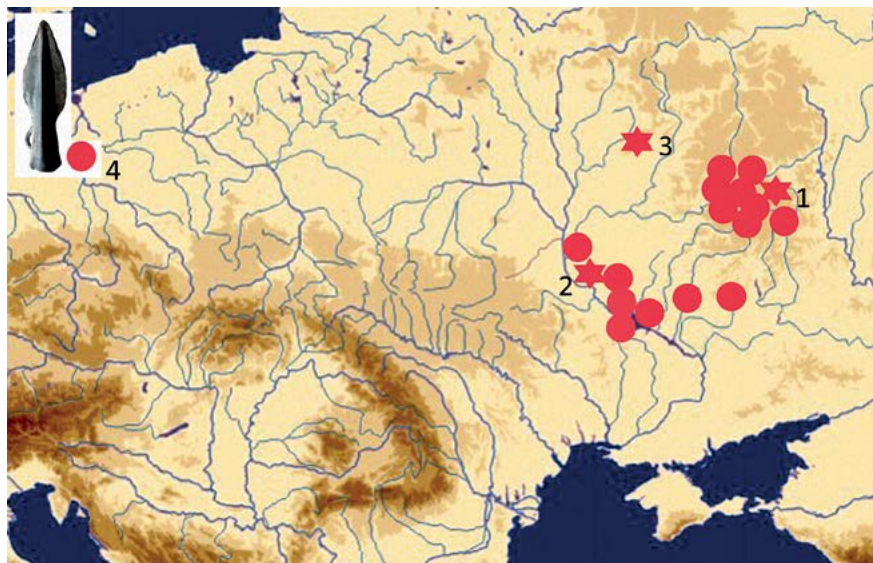


Fig. 7. Map of Holovuriv type spears: 1. Sumy hoard of 2022; 2. Holovuriv “workshop”; 3. Kvetun burial; 4. Holovuriv type spears.

participated. Therefore, considering the area of the findings, the attribution of the late variant of the Vinča–Altheim type flat axes and Holovuriv type spears to the Sosnytsia culture seems plausible. At the same time, the spears which are more certainly linked to the Berezhnivsko–Maivska Zrubna culture (a variant of the Zrubna culture, which existed in Ukraine) were different: the Zlanopol type.²²

Later, during the beginning of the Early Iron Age, the Sosnytsia culture served as the base for the Bondaryha culture, in which cremation was widely spread. This culture set the foundation for the local groups of Early Slavic people.

To sum up, there is a progress in north-eastern Ukraine inhabitants during the fourth to first millennia BC. At this time, metal flat axes of the Vinča–Altheim type appear to be the markers of cultural processes of the Eneolithic–Bronze ages.

²² Klochko 2001, 235–237, fig. 93, 7–12.

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- <https://violity.com/ua>

Dragana Antonović*

Selena Vitezović**

Vidan Dimić***

Institute of Archaeology
Belgrade, Serbia

Relative and absolute dating of the Prljuša mine on Mali Šturac: the first evidence for copper mining in the Bronze Age in the Balkans

Abstract: The mine at the site of Prljuša on Mali Šturac offers a new perspective on the development of mining in the Central Balkans. The original hypothesis that there was an Early Eneolithic copper mine in this place, based on the appearance of shafts and the manner in which the ore was exploited, changed after the discovery of several ceramic vessels and after absolute dates were obtained, which helped determine that this mine was from the Early Bronze Age. Pottery discovered in Shaft 7, according to the stylistic and typological traits, but also on the basis of radiocarbon dates obtained (2343–2138 cal BC), was attributed to the Early Bronze Age and the Bubanj–Hum III culture. A small number of finds belong to the Vatin culture. Such dating of the ceramic finds chronologically determines the functioning of Shaft 7 into the second half of the third millennium, with the possibility that it also continued in the beginning of the second millennium. However, no settlements can be linked with the miners, and the question whether they were from the vicinity or if they had arrived from far away remains open. A large ore deposit such as Prljuša could have been a gathering point for miners from different parts and of different populations in the times of great movements, and overlapping several cultures. Furthermore, it is possible that the miners were locals (living in a still undiscovered settlement), who were involved in intensive trade and exchange with both regional communities, and those at greater distances as well.

Key words: ceramics, central Serbia, Early Bronze Age, copper mine, C14 dates

* d.antonovic@ai.ac.rs

** s.vitezovic@ai.ac.rs

*** v.dimic@ai.ac.rs

Introduction

Metallurgy is one of the earliest complex transformative technologies, consisting of a system of different technological know-how and skills, actions and choices, complex logistics and planning. All archaeological data gathered thus far indicate that the earliest ore processing and production of metal items in Europe began in South-Eastern Europe.¹

Dates obtained by new research activities show that it occurred in the very beginning of the fifth millennium BC. Within the Vinča culture, in the Central Balkans, the first metal production was confirmed in Pločnik and Belovode, while in Bulgaria it is linked to the Karanovo V period.² Judging by the lead isotope analyses,³ the ore came from several mines, with archaeological research conducted in the mines at Rudna Glava, Alibunar and Jarmovac so far.⁴ The production of copper, and also bronze afterwards, continued in later periods as well, but until recently no mines were discovered in the territory of the Balkans that could be reliably dated to the Late Eneolithic and Bronze Age. Additionally, it was believed that malachite, the main carbonate ore of copper used in earliest metallurgy, was exhausted during the Eneolithic, hence the mining of the chalcopyrite copper ore ensued in the Bronze Age, the processing of which required a more complex technology.⁵

The mine at the site of Prljuša on Mali Šturac brings a new perspective on the development of mining in the Central Balkans. The original stance that there was an Early Eneolithic copper mine in this place, formed on the basis of the appearance of the shaft and the way the ore was exploited,⁶ changed after the discovery of several ceramic vessels and absolute dates that placed this mine in the early Bronze Age.

Geographical and geological data on the site

The site of Prljuša is located near the Mali Šturac peak on mount Rudnik, 100 km to the south of Belgrade (Fig. 1). It is a steep barren slope, el-

¹ Radivojević & Roberts 2021.

² *Ibid.*

³ Radivojević & Grujić 2018.

⁴ Черных 1978; Jovanović 1982; Derikonjić et al. 2011.

⁵ Powell et al. 2017.

⁶ Antonović et al. 2018.

lipsoidal in shape, stretching in the direction of north-east–south-west, with an area of about 2.5 ha extended from 880 to 990 m above sea level. Due to its unique appearance, reminiscent of scorched soil, the site is visible dozens of kilometres south of Rudnik. The whole of mount Rudnik is an area rich in ores, and it has been continuously exploited from the prehistoric times up to the present day. The lead-zinc ore deposit which has been exploited there for millennia belongs to the polymetallic type (lead, zinc, silver, copper, tungsten, etc.), and it consists of several dozen ore bodies covering the space of 3 km in length and over 1.5 km in width.⁷ Prljuša represents the end of a volcanic pipe (diatreme) through which lava penetrated to the surface in the Miocene, affecting the geological

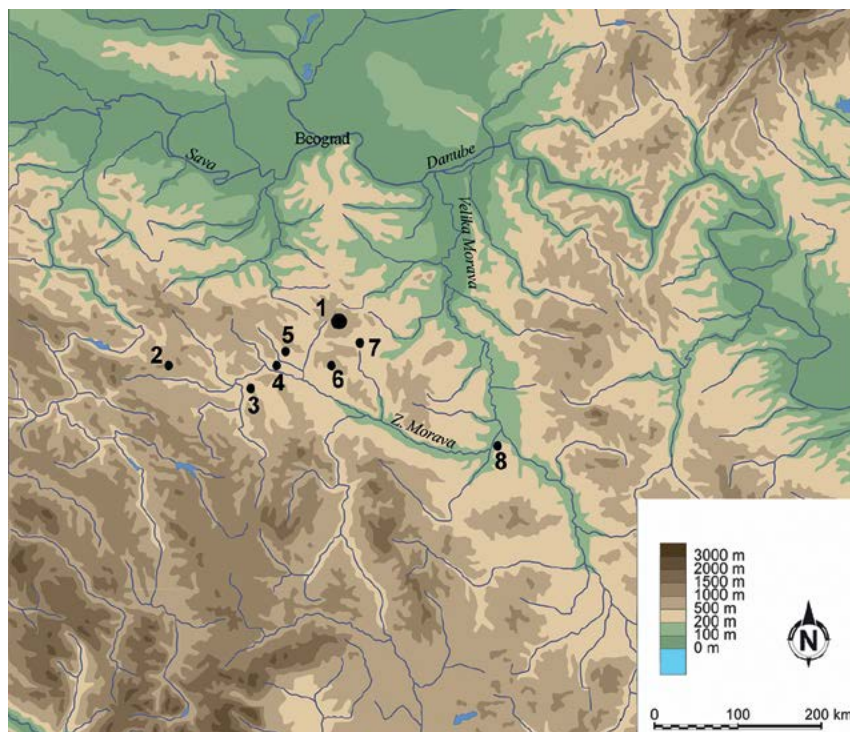


Fig. 1. Map of the sites mentioned here: 1. Prljuša, Mali Šturac; 2. Vranjani, site Veliki Lug; 3. Pilatovići, site Ravni Lug; 4. Prijedor, site Ade; 5. Gornja Gorevnica, site Slatina; 6. Ostra, site Sokolica; 7. Ljuljaci, site Milića Brdo; 8. Makrešane, site Jazbine.

⁷ Ђајић 2014.

structure of the place. The diatreme in Mali Šturac is composed of hydraulic breccias, sedimentary rocks, contact-metasomatically altered rocks, quartz latite and latite volcanic rocks, as well as ultramafic and listwanite fragments.⁸ Great veins of copper carbonate ore, predominantly malachite, spread through the very hard rocks of this place.

Archaeological research at Prljuša

The mine at the site of Prljuša was discovered in 1980 thanks to the information provided by Radoslav Milić, the chief geologist at the then company “Rudnik i flotacija ‘Rudnik’”. At the end of the 1970s, geological surveys were performed to a depth of 100 m in the upper parts of the site. It was discovered, on this occasion, that malachite reserves were at an enviable level, with an estimate that the amount of the polymetallic ore ranged up to 200,000 tons, with the copper content of 0.7–1.5%, but that the quality was not satisfactory for modern industrial exploitation.⁹ Borislav Jovanović began archaeological research in the following year, 1981.¹⁰ Until 1989, when research was halted, six prehistoric shafts were discovered in Prljuša, two of which were partially explored. The research of prehistoric mining was resumed in 2011. The new project included geophysical research as well as archaeological excavations. Geophysical examination of the lower half of the site enabled the detection of approximately twenty anomalies that indicated mining activities and possible ore shafts.¹¹ Three shafts were also excavated. One smaller shaft (Shaft 6) was examined in detail,¹² and surface ore exploitation (Shaft 4) was linked to it.¹³

Shaft 7 is the most researched and the largest one explored in Prljuša so far with an extremely large number of mining stone tools and several whole ceramic vessels which were significant for the chronological and cultural determination of this prehistoric mine.¹⁴ The complex of

⁸ Popović & Umeljić 2015, 43.

⁹ Milić 1980.

¹⁰ Јовановић 1988.

¹¹ Antonović, Vukadinović & Cicović 2014a.

¹² Antonović 2017.

¹³ Antonović, Vukadinović & Cicović 2014b.

¹⁴ Antonović, Vitezović & Dimić 2019; Antonović, Vitezović & Dimić 2021a; Antonović, Vitezović & Dimić 2021b. In previously published papers and documentation, this shaft was listed as Object 1 and Object 2 (Antonović, Vitezović & Dimić 2021a, 59).

corridors and galleries that extends almost horizontally, at a shallow depth below the surface of the ground, occupies an area of 450 m² (Fig. 2).¹⁵ From the entrance in the central part of the shaft, long and winding corridors stretched eastward and westward, following the spreading of the ore veins. Prehistoric miners used to make corridors of an irregular shape while following and exploiting ore veins, which are visibly different in appearance to the mining passages made in later periods, starting already with the Late Bronze Age.¹⁶ In several places, these corridors turn into galleries. So far, seven galleries connected by winding corridors and stairs carved into the rock have been discovered. The shaft probably had other entrances as well, but they were not preserved, like the one in Gallery 1 (Fig. 2).

This shaft is located at the very top of the site, at altitudes from 978 to 992 m above sea level. Since ore extraction would have begun, presumably, at lower altitudes, moving towards the top, it would seem most probable that Shaft 7 was the most recent shaft in use in Prljuša.

The context of ceramic finds

Ceramic finds were discovered in Shaft 6 and Shaft 7. In Shaft 6, eleven smaller atypical fragments were found. Based on their morpho-technical traits, it was concluded that they were most likely Late Eneolithic or Bronze Age pottery fragments.¹⁷ They were collected in the infill of Shaft 6 and, therefore, it was assumed that they originated from the upper parts of the site and that they ended up in Shaft 6 after being washed down together with the scree that filled that shaft. All fragments show traces of long-term water activity (Fig. 3).

In Shaft 7, eleven vessels were found which can be completely reconstructed, as well as several fragments that do not show any traces of having been washed away, or other significant taphonomic traces, suggesting that they were not brought by torrential waters and that they were the original mobile inventory from Shaft 7 instead. Ceramics were discov-

¹⁵ The surface may even be larger, however, this is the assumed surface due to the fact that the western edge cannot be explored because it is below an active local road towards Mali Šturac.

¹⁶ O'Brien 2015, 8, 169.

¹⁷ Богосављевић 1988, 31.



Fig. 2. Shaft 7: 1. Gallery 1; 2. Gallery 2; 3. Gallery 3; 4. Gallery 4; 5. Gallery 5; 6. Gallery 6; 7. Gallery 7; 8. entrance into the shaft; 9. possible second entrance into the shaft.

ered in several places: in the entrance hall, in galleries 1, 2, 3, 4, 5, 6, and 7 (Fig. 2).

Whole vessels were discovered in several places in Shaft 7, regularly distributed and placed in locations prepared specifically for them (Fig. 6).

One entire and fragments of two more biconical beakers with two handles were discovered in Gallery 1, along with two fragmented pots, as well as several fragments of vessels which could not be reconstructed due to the small number of pieces (Fig. 4: 1, 2; Fig. 8: 2, 3; Fig. 10: 1, 2).

To the west of Gallery 1, in the corridor leading from the entry into the shaft to Gallery 2, two biconical beakers with two handles were discovered, one of which is whole and the other quite fragmented (Fig. 4: 3, 4). Several fragments of other vessels were also found around them. The vessels were found on the opposite sides of the passage, along the very

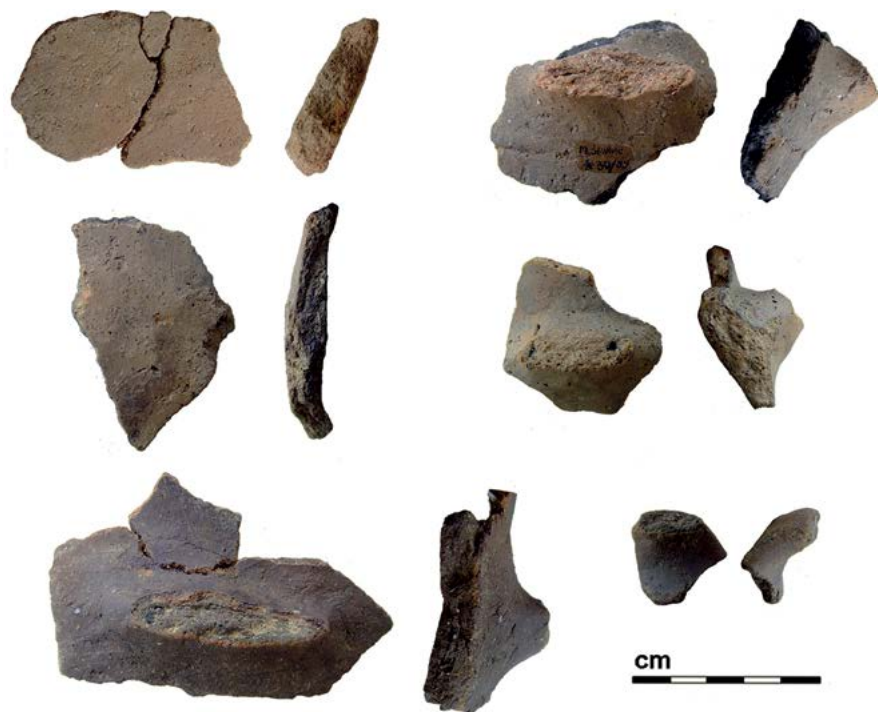


Fig. 3. Ceramic finds from Shaft 6.

wall of the shaft and on the levelled rock, hence it is assumed that this was their original position, where they were placed by prehistoric miners. One of the cups is small, while the other is significantly larger.

Further west, in Gallery 2, four whole but slightly damaged biconical beakers with two handles were discovered, regularly arranged on three opposite sides. The vessels, at the time of discovery, were in a layer directly next to the rock in which shallow niches were carved. It is assumed that the beakers stood in those niches until the ceiling collapsed, causing the vessels to fall out and get damaged. On the western edge of Gallery 2, directly next to the passage towards Gallery 3, another pot and a bowl were found, rather fragmented, along with several atypical fragments of other vessels (Fig. 4: 3, 5, 6; Fig. 5: 1–3; Fig. 10: 3).

In Gallery 3, the next one to the west, only one whole but damaged biconical beaker was found directly next to the rock that represents the eastern wall of the gallery, placed in a smaller carved-in niche (Fig. 5: 4; Fig. 7). In the same debris layer, but unrelated to it, another severely dam-

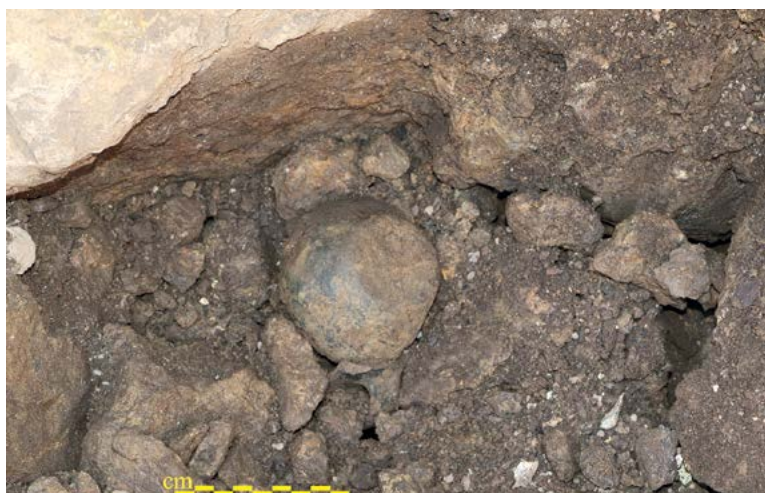


Fig. 6. Niche carved in rock in Gallery 2 with the beaker represented in fig. 4: 6.



Fig. 4. Beakers from Shaft 7: 1, 2. Gallery 1; 3, 4. corridor to the Gallery 2; 5, 6. Gallery 2.

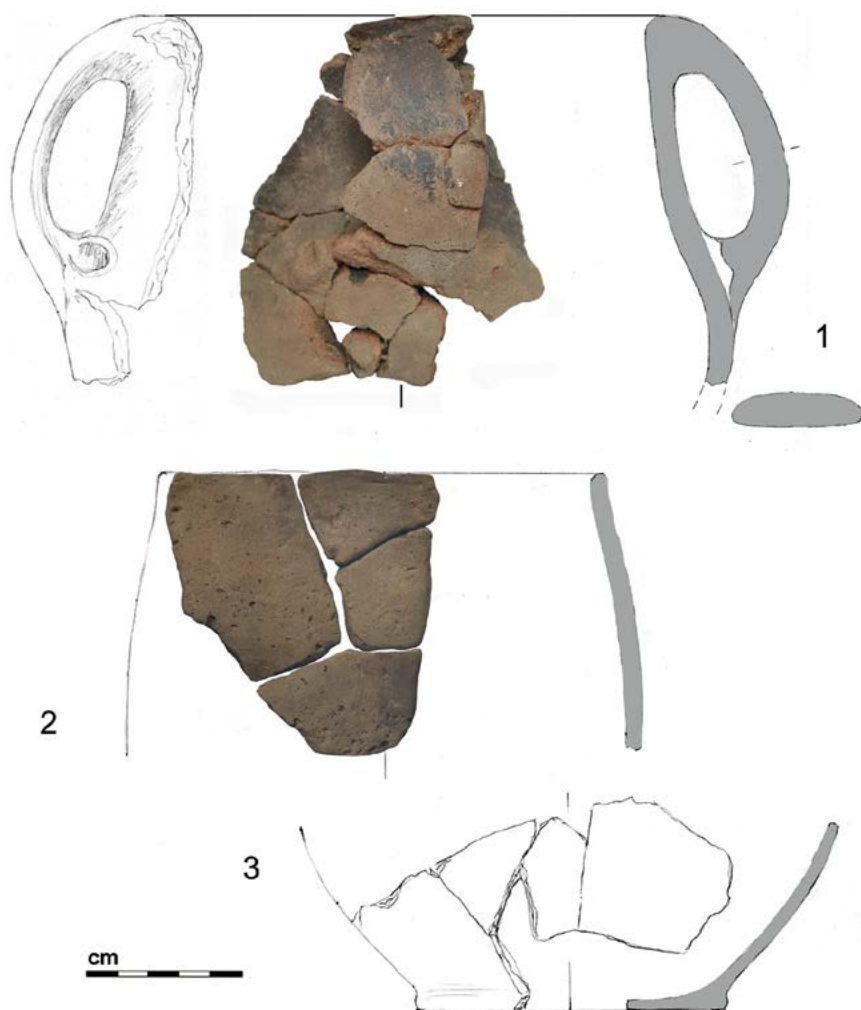


Fig. 8. Pots from Shaft 7: 1. Gallery 3; 2, 3. Gallery 1.

aged biconical beaker and a vessel fragment were found, the latter of which is assumed to have belonged to the same vessel type.

In the corridor leading from Gallery 3 to the end of Shaft 7, in the surface layers, a rather fragmented part of a vessel with a handle, probably a beaker, was discovered (Fig. 8: 1).

Near the entrance to Gallery 5, located on its northern side, three ceramic vessels were found in a small area in the eastern part of the en-

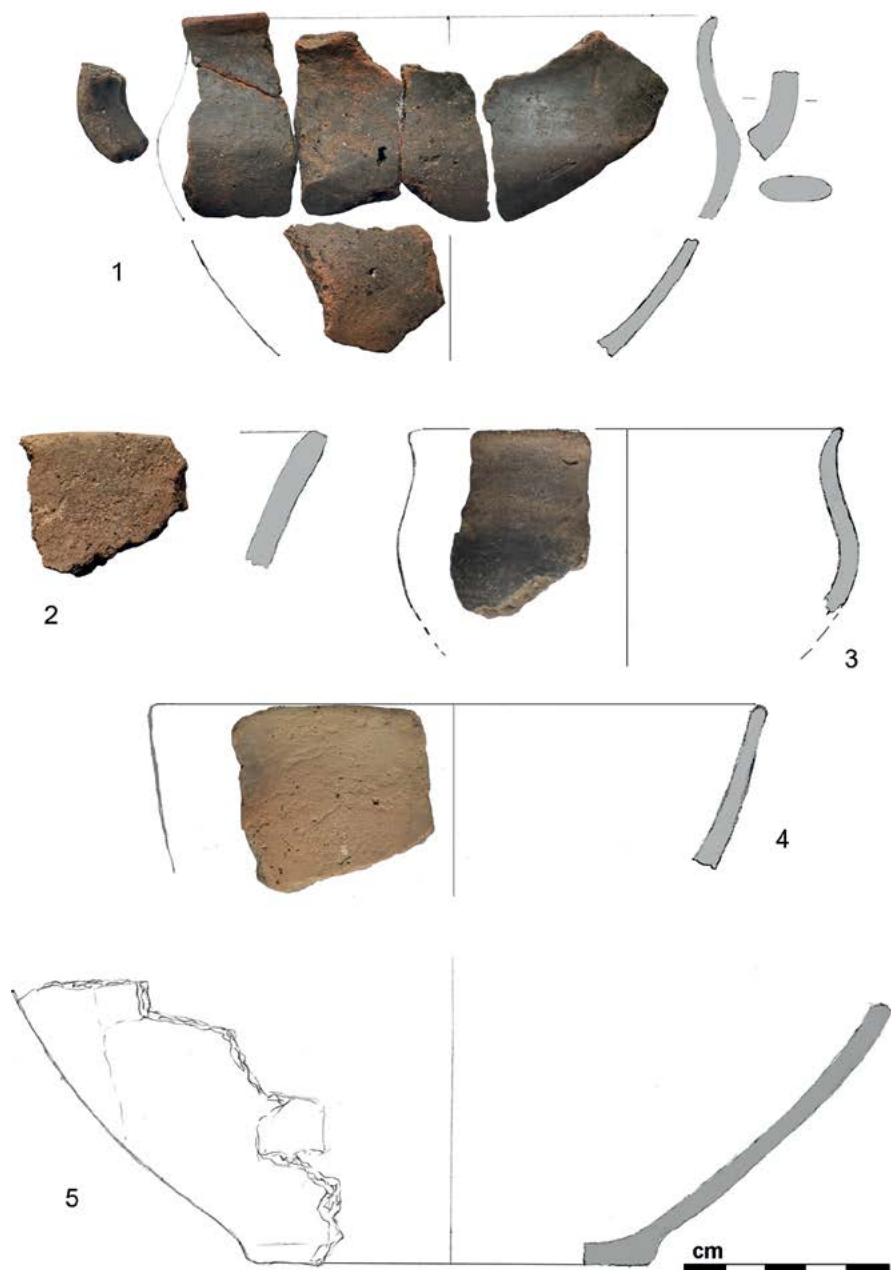


Fig. 10. Bowls from Shaft 7: 1, 2. Gallery 1; 3. Gallery 2; 4. Gallery 3; 5. Gallery 5.



Fig. 5. Beakers from Shaft 7: 1, 2, 3. Gallery 2; 4. Gallery 3; 5. Gallery 5.

trance passage (Fig. 5: 5; Fig. 9: 2; Fig. 10: 5). The find consisted of one pot with two handles, the lower part of a pot of the same dimensions, and a small biconical beaker with handles.

Gallery 6 is in the immediate vicinity of Gallery 5, and both were entered from the same plateau above them. The bottom of a larger vessel of unknown shape was found in it, next to the rock on the northern side of the gallery.



Fig. 7. The moment of discovery of the beaker represented in fig. 5: 4.

Types and categories of ceramic vessels

Although these pottery findings are not numerous, some of these vessels were found complete, or it was possible to reconstruct them, thus enabling cultural-chronological classification. Only three types of vessels have been found: beakers, pots and bowls.

Nine whole but damaged beakers were found in several places in Shaft 7. Those are biconical and globular vessels with a slightly flared rim, a short and only slightly accentuated neck, a flat bottom, and two band-shaped handles on opposite sides, running from the centre of the belly to the rim, without surpassing it (Fig. 4–5). There is a slightly accentuated nipple-shaped protrusion on the opposite sides, between the handles, in the middle of the belly. Some beakers have a finely polished surface. The beakers were made of well-purified clay, with a small admixture of quartz sand. The firing colour ranges from light to dark grey-brown. They are mostly small, 65–126 mm high.

Larger examples of vessels, identical in shape to the two-handled beakers, with a height of up to 200 mm and the opening diameter of 170–200 mm, represent a borderline class, similar to pots or even am-



Fig. 9. Pots from Shaft 7: 1, 3. Gallery 7; 2. Gallery 5.

phorae.¹⁸ One such vessel, somewhat coarser than the beakers, has decorations on both sides of the handle in the form of a recess, imprinted by finger (Fig. 8: 1).

The appearance of pots could be partially reconstructed only for two groups of fragments (Fig. 8: 2; Fig. 9: 1): one smaller, globular (Fig. 8: 2), for which we do not know whether it had handles; and one large, biconical, with a decoration in the form of an ornamental strip with fingerprints, located in the upper part of the belly (Fig. 9: 1). For two vessels, of which only the lower part of the belly and the bottom are preserved (Fig. 8: 3), it is assumed, based on their size, that they were pots. The height of the pots can be reconstructed on the basis of preserved parts, and they are in the range of 170–350 mm. Only one globular pot, shaped in the style of a beaker, is almost completely preserved (Fig. 9: 2). The upper

¹⁸ Богдановић 1986, 43, 46.

part of the pot is broken off, hence the rim and the top of the handles are missing. It was made of finely purified clay, with a well-polished surface, light brown firing colour, and a deformed lower part of the belly. The assumed height of the pot is 190 mm. Small pieces of vessels, presumably fragments of pots, were found in several places in Shaft 7. Those are fragments with slightly thicker walls, up to 10 mm, with a rough texture, made of insufficiently purified clay with a lot of small gravel and sand, poorly baked, as indicated by their friability (Fig. 9: 3).

Bowls are less numerous in the ceramic material from Prljuša and they are all fragmented. Two biconical bowls were found (Fig. 10: 1, 4), one of which had a band-shaped handle whose position could not be determined with precision (Fig. 10: 1). Two bowls are conical (Fig. 10: 2, 3). All the bowls were made of purified clay with a small admixture of sand, light and dark grey-brown. The diameters of the openings are in the range of 110–240 mm.

Cultural and chronological attribution of the pottery

Analogies for the ceramics discovered in Prljuša can be found in the material from Early Bronze Age sites in Central Serbia. The two-handled beakers are certainly the most indicative for establishing their cultural and chronological determination. The pear-shaped beakers, which are more numerous, are identical to those found in Makrešane–Jazbine, dated to the Late Eneolithic and Early Bronze Age and the two-handled beaker culture (Jazbine B),¹⁹ then in Ostra–Sokolica,²⁰ Gornja Gorevnica–Slatina,²¹ and Ljuljaci–Milića Brdo,²² all attributed to the Early Bronze Age, the proto-Vatin, and Bubanj–Hum III cultures. Such beakers continued to be in use during the Middle Bronze Age as well.²³ The biconical beakers from Prljuša also have almost all the elements that link them to the Early Eneolithic examples of the Bubanj–Hum I culture,²⁴ and those from the Chalcolithic of Bulgaria.²⁵ The absence of ornaments

¹⁹ Стојић & Чађеновић 2006, 287, кат. 10.

²⁰ Дмитровић & Љуштина 2007, 24, Т. II, 1–3.

²¹ Дмитровић 2015, Appendix 116, 1.

²² Богдановић 1986, 36 – beakers of type B1.

²³ *Ibid.* 61.

²⁴ Милановић & Трајковић-Филиповић 2015, 20, сл. 14, 1.

²⁵ Георгиева 2012, 179, Т. 35–36.

and band-shaped handles makes them closer to pottery from Early Bronze Age sites in central Serbia. We find analogies for them at several sites from the Early Bronze Age: in Vranjani, site of Veliki Lug, mound 3;²⁶ Pilatovići, site of Ravni Lug, mound I;²⁷ and Prijedor, site of Ada.²⁸

The large vessel which is identical to small beakers in shape, but is more similar to pots in terms of its size (or amphorae, according to some authors),²⁹ has no direct analogies from sites in the area, primarily because of the ornamentation at the base of the handle (Fig. 8: 1). The vessel has some similarities in shape with two-handled pots (types H-4a and H-4b), and amphorae (type I-2) from Ljuljaci.³⁰ Pots from Ljuljaci were in use during all the horizons (Ljuljaci I–III), while type I-2 amphorae are represented only in Ljuljaci III.³¹ Because of this, as well as the reduced ornamentation which suggests the Vatin culture, the vessel from Prljuša should be identified as a proto-Vatin pot.

A large vessel from Gallery 7 (Fig. 9: 1) also belongs to proto-Vatin pots. In terms of the shape and type of ornamentation, though not its position on the vessel, it is identical to pots from Sokolica.³² Similar vessels also exist in Ljuljaci, but they are defined as a pithos (type G-1 and G-2), which can be found in all horizons of the settlement (Ljuljaci I–III).³³ According to the aforementioned analogies, the pot from Prljuša can also be attributed to the proto-Vatin culture. The globular pot, whose entire upper part is damaged (Fig. 9: 2), has no direct analogies in the material from sites in the vicinity. It is closest to the amphorae from Ljuljaci (type I-2),³⁴ dated to the Middle Bronze Age and the Vatin culture (Ljuljaci II–III).³⁵

The biconical bowls from Prljuša have their parallels from Sokolica and are attributed to the Vatin culture.³⁶ The same shape is also found in

²⁶ Zotović 1985, T. V, 3.

²⁷ Дмитровић 2015, Appendix 16, 4.

²⁸ Stojić & Nikitović 1996, 210; Дмитровић 2015, Appendix 74.

²⁹ Богдановић 1986, 67.

³⁰ *Ibid.* 43, 46.

³¹ *Ibid.* 61.

³² Дмитровић & Љуштина 2007, 29, T. VII, 7.

³³ Богдановић 1986, 43, 61.

³⁴ Богдановић 1986, 46.

³⁵ *Ibid.* 61, 70.

³⁶ Дмитровић & Љуштина 2007, 19, 26, T. IV, 3, 6.

Ljuljaci (type E-2d), and it belongs to the final horizon of the settlement (Ljuljaci III), determined into the Middle Bronze Age and the classic Vatin culture.³⁷ One example from Prljuša found in the upper layers of the infill of Gallery 1 (Fig. 10: 1) can be dated to the Middle Bronze Age and the Vatin culture, same as the finds from Ljuljaci.

Conical bowls are universal utilitarian vessels, with some forms that have been in use since the Neolithic up to the present day, therefore, they are not suitable for cultural-chronological determination. Such are the examples from Prljuša as well (Fig. 10: 2, 3), which can be brought into connection with the findings of the Vatin culture from Sokolica,³⁸ however, such shapes can also be found in other cultures as well.

Absolute radiocarbon dates

Radiocarbon dates were obtained for two samples of charred wood from Prljuša, made from European beech (*Fagus sylvatica*), which were found under beakers in Gallery 2 (Fig. 5: 1), and Gallery 3 (Fig. 5: 4). The piece of wood found under a beaker in Gallery 2 is dated to 2288–2138 cal. BC, and the one found in Gallery 3 to 2343–2198 cal. BC (Fig. 11).³⁹ Both samples yielded dates linked to the Early Bronze Age and represent a *terminus ante quem* for the ceramics from the two mentioned galleries. During the collapsing and filling in of the mine shafts, the ceiling of the shaft and the wooden substructure, which probably existed in some places, were the first to fall. The charred wood used for the dating of the shaft most likely originated from that substructure. Ceramic vessels that were in niches in the rock fell from their original places only in the following debris layers, so it can be said that there is an inverted stratigraphy of the infill of the galleries in Shaft 7. It can be assumed that the wooden substructure and the ceramic vessels were set at the same time, therefore the dates obtained for the wood – even though it was discovered under the pottery – would represent the time when the shaft was abandoned, and the pottery found in it could certainly not be more recent than that time.

³⁷ Богдановић 1986, 41, 61, 70.

³⁸ Дмитровић & Љуштина 2007, 26, T. IV, 1–2.

³⁹ The dating was performed at Leibniz-Labor für Altersbestimmung und Isotopenforschung, AMS 14C-Labor, Christian-Albrechts-Universität zu Kiel.

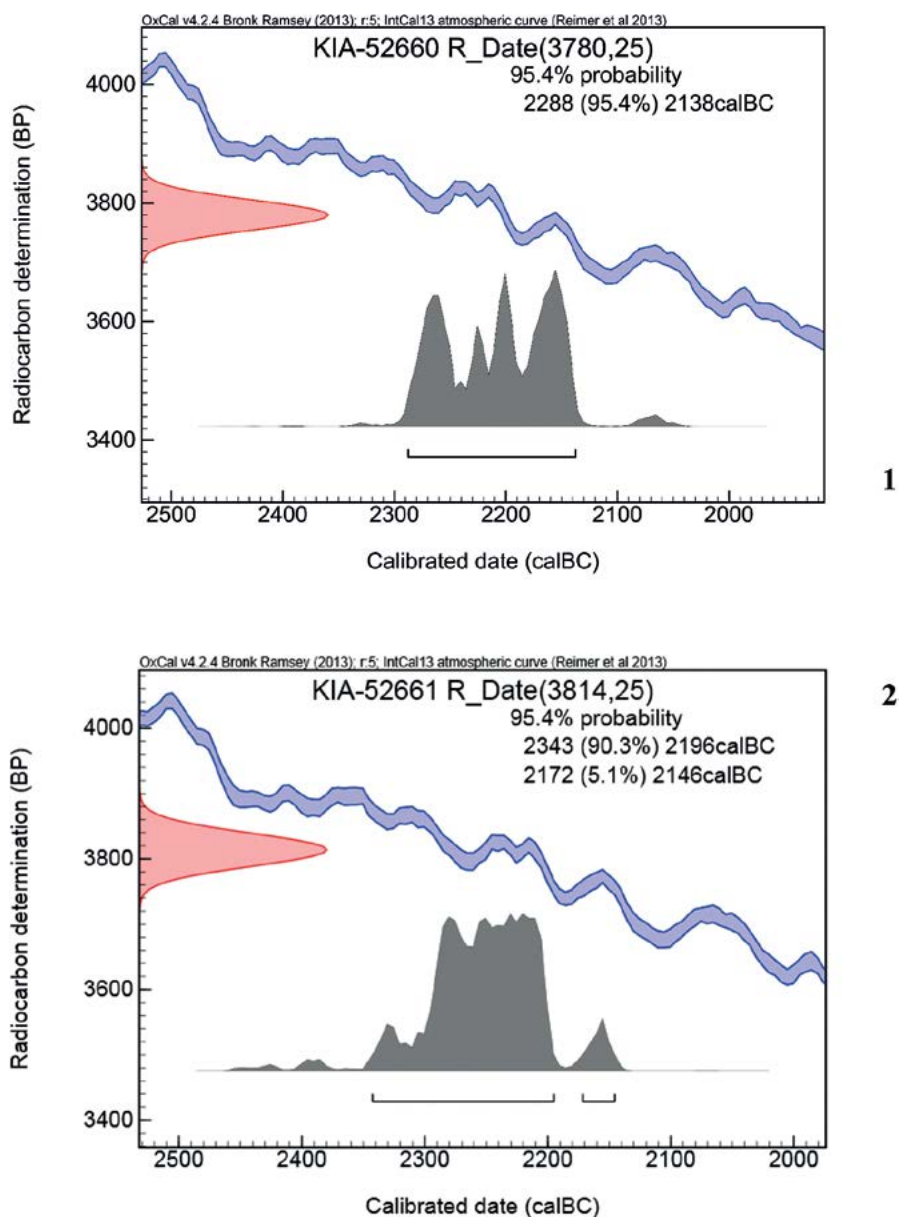


Fig. 11. Absolute radiocarbon dates: 1. sample of charred wood (KIA 52660) found under the beaker in Gallery 2 (fig. 6: 1); 2. sample of charred wood (KIA 52661) found under the beaker in Gallery 3 (fig. 5: 4).

Discussion and concluding remarks

Based on their stylistic and typological features, analogies, but also on the basis of radiocarbon dates, the ceramic items discovered in Shaft 7 in Prljuska are attributed to the Early Bronze Age and the Bubanj–Hum III culture. A smaller number of finds (Fig. 8: 1; Fig. 9: 1; Fig. 10: 1, 4) belong to the Vatin culture (proto-Vatin, classic Vatin). This dating of the pottery also provides a chronological determination for the most recent shaft in Prljuska – Shaft 7, which was used in the second half of the third millennium, though it is possible that it continued to be used in the beginning of the second millennium as well. Although an older method of ore exploitation, applied in the Early Eneolithic, was registered in the shaft, ceramics and absolute dates show that ore extraction at this place was carried out during the Early and in the beginning of the Middle Bronze Age, and in a manner that did not change for two millennia. That is why it can be said that Prljuska is, for the time being, the only known Bronze Age copper mine in the Balkans. Malachite reserves at Prljuska are still extensive, and the ore veins stretch from the surface to a hundred meters in depth,⁴⁰ meaning that they were not exhausted during prehistoric times, as some authors believe.⁴¹ Certain questions cannot be answered yet, since no settlement has been discovered in the immediate vicinity of the mine in Prljuska so far, which could be linked to the mining activities and metallurgy in the Early Bronze Age. It remains unknown to whom the mine belonged, that is to which settlement it was connected. The mixing of the Bubanj–Hum III finds with Vatin pottery shows a situation that is similar to the one registered at several sites from the Early Bronze Age in central Serbia (Sokolica in the village of Ostra, Slatina in Gornja Gorovnica, Milića Brdo in Ljuljaci). According to some authors, this area represents the foundation for the genesis of the proto-Vatin horizon, from which the Vatin culture developed.⁴² A large mine such as Prljuska could have been a meeting point of miners from various regions and different populations at a time of great movements, and overlapping several cultures.⁴³ The central area of the Bubanj–Hum III culture was the wider

⁴⁰ Milić 1980.

⁴¹ Powell et al. 2017.

⁴² Ljuština & Dmitrović 2009, 62.

⁴³ Garašanin 1983; Тасић 1983, 58–59.

region of the basin of Niš, and the Pannonian basin for the Vatin culture,⁴⁴ therefore, the spreading and mixing of these cultures in the territory of central Serbia could have been a consequence of the search for rich ore deposits, in which the mountain of Rudnik could not have been overlooked.

Acknowledgements

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⁴⁴ Ljuština 2012.

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Jovan D. Mitrović*

National Museum of Serbia
Belgrade, Serbia

The Early Bronze Age Horizon at the Site of Gradina on the River Bosut

Abstract: This paper presents and interprets both published and unpublished movable and immovable finds attributed, based on the vertical stratigraphy of the Gradina site on the river Bosut, to Layer IIIa and thus to Early Bronze Age communities known in scholarly literature as the Vinkovci–Somogyvár archaeological group. Based on the analysis of the context of the finds, the paper proposes a more nuanced interpretation of the spatial distribution of Vinkovci-type features, as well as a more precise dating of the horizon itself (the end of phase Br A1/A2, c. 2400/2350–2200 BCE).

Keywords: Gradina on the river Bosut, Early Bronze Age, Vinkovci–Somogyvár archaeological group

“...I have heard that a bridge is being built across the Bosut near Batrovci, that an excavation of some gradina is taking place there, and that many antiquities have already been uncovered... It is called a *gradina*, but these are enormous mounds (*tumuli*), one of which a surveyor had excavated to a depth of two meters. There, three hearths, one atop the other, were observed; and many prehistoric objects were found during the excavation”¹

— *Antun Bogetić, theologian from Đakovo
and distinguished commissioner of the National Museum
and the Croatian Archaeological Society*

* j.mitrovic@narodnimuzej.rs

¹ Bogetić 1880, 123.

History of Research

The settlement at Gradina on the river Bosut has been mentioned in the archaeological literature since the mid-19th century.² Following systematic rescue excavations conducted in 1964–1965 and 1975–1988, Gradina became firmly established in both national and international scholarship as a benchmark site and type-site that defined a newly recognised cultural group, named the Bosut culture, of the Early Iron Age.³

While considerable scholarly work exists on the Iron Age occupation at Gradina (e),⁴ the Early Bronze Age horizon at Gradina (and at other contemporary sites in eastern Syrmia) has remained less well studied. Existing texts primarily offer descriptions of archaeological activity without comprehensive contextual analysis, full presentation of systematically excavated material, or an internally defined chronological framework for the site.⁵

These deficiencies were clearly pointed out in a synthetic study by G. Kulcsár, who conducted a detailed analysis of the material culture and research status of all sites belonging to the Vinkovci–Somogyvár archaeological group in present-day southern Hungary, with general references to sites in Croatia, Serbia, and Slovenia.⁶ The author attempted to date sites in eastern Syrmia (c. 2800–2500 BCE according to the Hungarian chronology), but solely based on a limited number of published finds.⁷ For that reason, this segment of her research was understandably reduced.

² Stojanović 1859, 202–205; Bogetić 1880, 123; Сремац 2014a.

³ Гарашанин 1973; Brukner, Jovanović & Tasić 1974; Поповић & Радојчић 1996; Медовић & Медовић 2010; Сремац 2014b.

⁴ Popović 1981; Tasić 1987, 85–92; Vasić 1987, 536–555; Popović 2003, 311–320; Medović & Medović 2010.

⁵ The investigations at Gradina were primarily of a protective nature, but in certain aspects also had an analytical and scholarly character. Over the course of these excavations, an area of more than 650 square meters was explored. Due to a series of unfortunate socio-political circumstances in the territory of the former Yugoslavia during the 1990s, a monographic publication of the complete material has not materialised to this day. Trbuhović 1956, 147–149; Tasić 1963, 50–52; Tasić 1965a, 117–128; Tasić 1965b, 47–50; Tasić 1968, 19–29; Tasić 1969, 39–42; Popović & Medović 1969, 35–36; Tasić 1971, 164–167; Girić 1981, 79; Garašanin 1983, 471–475; Тасић 1983; Tasić 1984, 15–32; Petrović 1991, 7–16; Vranić 1991, 19–26; Marković 1989, 413–421; Marković 1994; Bondár 1995, 254; Popović 1997, 7–40; Stojić 2004, 129–142; Koledin 2008.

⁶ Kulcsár 2009, 225–347, 402–408.

⁷ Kulcsár 2009, 259–261; Kulcsár 2013, 643–659.

In Hungarian archaeology, the period corresponding to the first half of the third millennium BCE is considered a transitional phase from the Copper to the Bronze Age, particularly in adjacent regions of Hungary (c. 2800/2700–2600/2500 BCE). In Croatian scholarship, the period from the 28th/27th to the 25th century BCE is understood as the late classical or final phase of regional variants of the Vučedol culture.⁸

Traditional interpretations have assumed that, during the Early Bronze Age, Syrmia was inhabited by diverse communities whose cultural manifestations were rooted in the late classical Vučedol tradition. Since the 1960s, these have been recognised in the literature as the Vinkovci–Somogyvár cultural entity.⁹

S. Dimitrijević was the first to distinguish the Vinkovci culture of the Early Bronze Age as a separate cultural manifestation and to provide its chronological framework, based on his 1962 excavations at the eponymous site of Vinkovci–Tržnica.¹⁰ In the second half of the 20th century, it became clear that Vinkovci finds did not differ significantly from those of the northern Somogyvár culture in southern Hungary. Thus, it was broadly accepted that these two formed a shared cultural complex during the Early Bronze Age.

The Vinkovci group extended across a broad area of southern Pannonia, including Syrmia and Slavonia. Based on stratigraphy observed during the 1962 excavations in Vinkovci, Dimitrijević proposed an internal chronology for the Vinkovci culture divided into early and late phases, each with sub-phases (A1/A2 and B1/B2).¹¹ Most known Vinkovci settlements have been identified through systematic surveys or isolated finds. These settlements were typically located on elevated terrain near rivers. They were mostly single-layered with a thin cultural deposit that was often poorly preserved; the architectural features primarily consist of numerous pits, hearths, and a range of associated artefacts.¹²

⁸ For the chronology of the Bronze Age in Central Europe, Bertemes and Heyd proposed an additional phase, Br Ao, which they placed around 2350–2250 BCE (Bertemes & Heyd 2002, 185–229). Kulcsár & Szeverényi 2013; Krmpotić et al. 2016, 83.

⁹ Bóna 1965, 17–63; Dimitrijević 1966; Dimitrijević 1982, 7–36; Tasić 1984, 15–32; Kalicz-Schreiber 1998–1999; Kulcsár 1998–1999; Velušček & Čufar 2003.

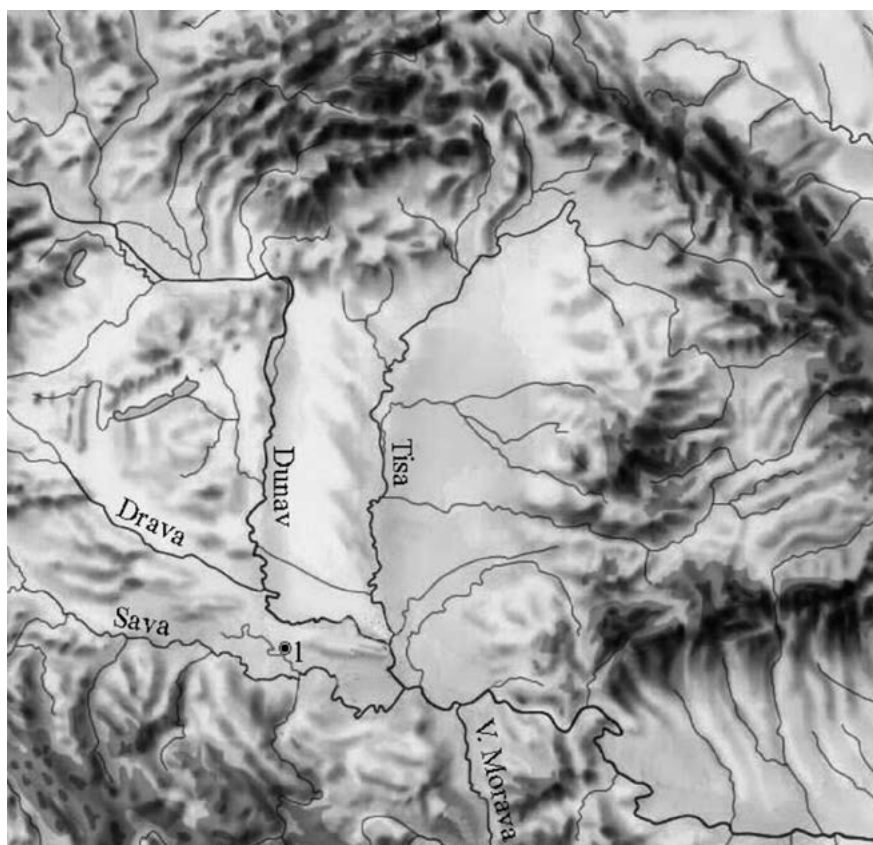
¹⁰ Dimitrijević 1966.

¹¹ Dimitrijević 1982, 7–36.

¹² Hirschler 2009, 145.

The Natural and Cultural Landscape

The Gradina site is situated in a prominent position along the left bank of the Bosut river, between the villages of Batrovci and Vašica, on the road that branches north from the Belgrade–Zagreb highway toward Šid and Ilok. The site occupies a flattened, ellipsoidal plateau measuring 265 by 60 meters, rising approximately ten meters above the surrounding terrain. Most of the settlement was naturally protected by watercourses – by the Bosut to the south and the Struga stream to the west. The two flanks not naturally defended were secured by a deep defensive ditch (Figs. 1, 2). Various authors have hypothesised that such a fortification system was likely constructed already during the Bronze or Early Iron Age.¹³



¹³ Medović & Medović 2010, 9–15, fig. 11 a–b; Spasić 2011, 92; Blečić Kavur & Mitrović 2023.



Figure 1. and 2. Geographical location of the archaeological site Gradina on the Bosut River (Medović & Medović 2010, 8–9).

Thanks to a well-defined cultural and chronological stratigraphy, the site has yielded cultural horizons spanning a remarkable (pre)historic verticality of occupation, not only within the narrower region but across the broader south Pannonian area. Available data suggest that the earliest settlement was founded during the Final Neolithic (Bosut I), with occupation continuing – albeit with interruptions – through the Copper Age (Bosut II).¹⁴ This was followed by a more substantial Bronze Age horizon (Bosut III), within which the Vinkovci, Vatin, and South Transdanubian Encrusted Pottery cultures have been identified. After a hiatus, life resumed at Gradina in a particularly rich horizon of the Early (Bosut IV a–c) and Late Iron Age (Bosut V). In this way, a mound with cultural layers almost six meters in depth was formed (Fig. 3).¹⁵

¹⁴ Spasić 2011; Spasić 2015.

¹⁵ Medović & Medović 2010, 9–14; Blečić Kavur & Mitrović 2023.

85,36	MLAĐE GVOZDENO DOBA	Bosut V
85,31		
83,50	STARIJE GVOZDENO DOBA	Bosut IV c
		Bosut IV b
		Bosut IV a
81,52	BRONZANO DOBA	Bosut III
80,62		
80,14	ENEOLIT	Bosut II (Černavoda III-Boleras)
79,70	NEOLIT	Bosut I (Lendel)

Figure 3. Graphical representation of the stratigraphy of cultural layers at the site Gradina on the Bosut River (Medović & Medović 2010, 18, fig. 11c).

The Early Bronze Age Horizon

Archaeological investigations at Gradina revealed that the communities which established the settlement on the clayey and relatively compact geological stratum (between ▼80.62–81.52 m a.s.l.), including the remains of several features, can be attributed to the Vinkovci cultural group or to the Bosut IIIa horizon.¹⁶ The first finds were recorded in 1976, and by 1986 fourteen pits and three food-preparation hearths with grill-supporting posts had been excavated (Fig. 4).¹⁷ Almost every pit yielded a large quantity of ceramic material – sometimes ten or more vessels, complete or only slightly damaged.

The impressive Vinkovci layer with movable finds was defined from the base of the 21st up to the 23rd excavation layer,¹⁸ with layers 24, 25, and 26 representing the cuttings of Vinkovci pits.¹⁹ Areas lacking built structures but yielding Vinkovci finds

¹⁶ Tasić 1984; Kulcsár 2009, 225–347; Medović & Medović 2011, 19.

¹⁷ Field journal for the years 1976 and 1980–1986, using the documentation of the Regional Archaeological Collection Gradina on the Bosut housed at the Simeon Pišćević Public Library in Šid, hereinafter referred to as NBS. Tasić 1984, 17–18.

¹⁸ According to the methodology in use at the time, an excavation layer represented a mechanically defined layer ▼approximately 25–30 cm thick.

¹⁹ It should be noted that in excavation layers 24, 25, and 26, Early Bronze Age, Copper Age, and Neolithic finds appear together in certain squares in roughly similar proportions, which prevents a complete reconstruction and primary cultural attribution of these layers.

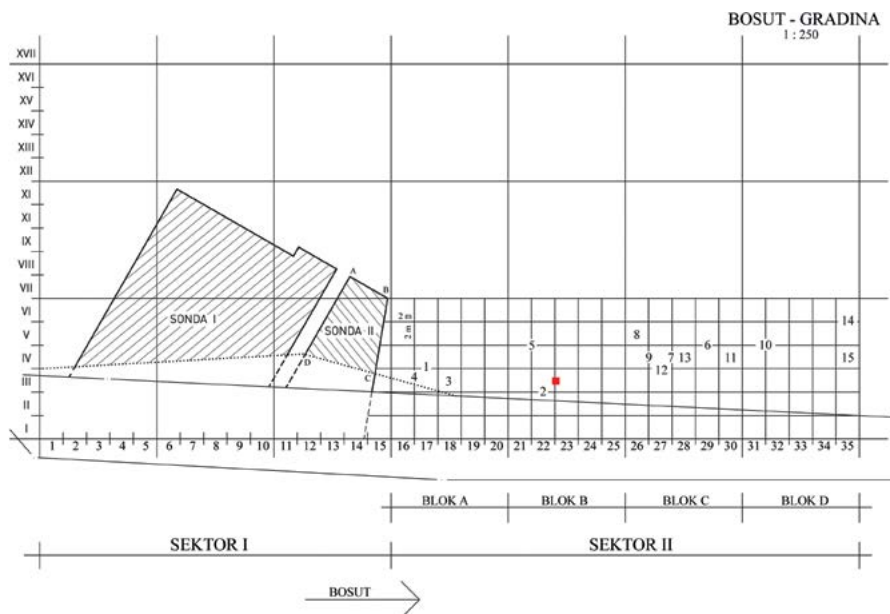


Figure 4. Situational plan of Gradina on the Bosut River and the areas investigated from 1964 to 1988 with the location (■) of the gold hoard and the identified objects from the Early Bronze Age, (1. object/pit 60, 2. object 61/pit, 3. object/pit 83, 4. object/pit 77, 5. object/pit 109, 6. object/pit 252, 7. object/pit 250, 8. object/pit 253, 9. object/pit 251, 10. object/pit 258, 11. object/pit 259, 12. object/pit 255, 13. object/pit 264, 14. object/pit 266, 15. object/kiln 248) (Medović & Medović 2010, 10; technical preparation and addition by S. Popović).

were securely documented in Trench II of Sector I, while the thickest deposits occurred in Blocks C and D of Sector II.

The movable and immovable remains of the Vinkovci horizon have remained almost entirely unpublished, apart from reports by M. Girić (1981) and N. Tasić (1983, 1984), where the Vinkovci material was presented only in summary form, as part of preliminary results from ongoing research.²⁰

During the 1980 excavation campaign at Gradina, a most unusual and wholly unexpected discovery for the Vinkovci–Somogyvár cultural

²⁰ Girić 1981, 79; Tasić 1983, 45–49; Tasić 1984, 15–32; Kulcsár 2009, 261–262.

horizon was made: a hoard of gold objects. At the base of the 21st primary layer, on the border of grid squares 22 and 23, Column III, a fragmentary vessel²¹ was uncovered containing 61 gold objects, with a total weight of 29.23 grams (comprising 54 appliqué discs and their fragments, and 7 spiral wire ornaments). When presenting this extraordinary find, N. Tasić also provided a detailed description of a round pectoral plate which, regrettably, has not survived. The assemblage represents a substantial hoard of exclusively ornamental items, heterogeneous in character.²²

General Typology of Ceramic Finds from Gradina on the River Bosut

The ceramic repertoire of the Vinkovci group is remarkably consistent across sites in Slavonia and Syrmia. One would be mistaken to view the Vinkovci culture as a mere evolutionary continuation of the Vučedol culture, that is, as a simple decline in ceramic ornamentation. The development of this new group's ceramic tradition likely involved numerous factors, including population movements and shifts in economy – from sedentary agriculture to pastoral nomadism.²³

Several forms of ceramic vessels characteristic of the Early Bronze Age in the southern Pannonian region are present. These include, primarily, bowls (either conical or gently rounded) with a short shoulder and a strongly profiled, outward-bending rim. From the rim to the shoulder, short, strap-like handles are usually attached, sometimes asymmetrically. Another widespread form is the jug with a single strap handle, beginning just below the rim and ending at the belly. Also common are jugs with tall necks, strap handles below the rim, and sharply biconical lower bodies. A particularly distinctive Vinkovci form is the so-called flask-shaped vessel: a cylindrical, rather crudely fashioned vessel with tubular handles near the rim. This type is present at nearly all sites between lake Balaton in the north and the Morava valley in the south.²⁴

In addition to these most common and diagnostic ceramic forms of the Vinkovci (and Somogyvár) cultural group, one also finds squat pots

²¹ We have not yet been able to identify it in the NBŠ documentation.

²² Tasić 1984, 22–23; Blečić Kavur & Mitrović 2023.

²³ Dimitrijević 1966; Dimitrijević 1982, 7–36; Тасић 1983, 45–50; Tasić 1984, 15–32.

²⁴ Тасић 1983; Kulcsár 2009.

with wide openings and no handles, as well as larger amphorae. The amphorae or storage vessels have rounded bodies, narrow cylindrical necks, and considerably narrower mouths relative to the body diameter, with small handles that are more decorative than functional. There are also slightly shorter examples with relatively wide mouths, resembling pots.

Decoration across these forms is generally uniform. The lower body is typically roughened – often using the barbotine technique, with vertical applications made using fingers or brush-like tools. The upper body is smoothed and bears plastic decoration, such as finger- or nail-impressed bands. The upper portions often display plastic appliqués in the form of button-like nodules or short vertical ribs.

A survey of the complete corpus of Vinkovci ceramic material from the site revealed no examples of stemmed bowls with internal geometric incisions, which are typical of the late Vučedol, Makó, and early Vinkovci–Somogyvár cultural phases.

According to preliminary results, which are primarily based on relative chronological comparisons with neighbouring cultural phenomena, and after comparing the material with that from other sites of the Vinkovci (and Somogyvár) regional variants, the proposed chronological framework for the settlement established by the Vinkovci community would correspond to the end of phase Br A1/A2, that is, approximately 2400/2350–2200 BCE.²⁵

Structures from the Early Bronze Age Horizon²⁶

The communities of the Vinkovci cultural group did not construct long-lasting settlements. In contrast to the developed, above-ground, massive

²⁵ It should be noted that, more recently, an unpublished absolute date has been obtained for a regional variant of the Vinkovci group (the Belotić–Bela Crkva group), relating to a pit from Ostrikovac near Čuprija. The date is approximately parallel to those from the sites of Dučalovići and Krstac (western Serbia), i.e., around the 26th–24th century BCE. I take this opportunity to express my gratitude to my colleague Aleksandar Bulatović from the Archaeological Institute in Belgrade for providing this information orally. The results of his research and the conducted radiocarbon analyses are currently in the process of publication. Dimitrijević 1966; Dimitrijević 1982, 7–36; Machnik 1991; Tasić 2003, 23–34; Tasić 2006a; Tasić 2006b, 7–16; Kulcsár 2009, 230–232, 259–270; Artursson et al. 2010, 87–121; Gál & Kulcsár 2012, 207–214; Fischl, Kiss & Kulcsár 2013, 9–22; Duffy 2014; Fischl et al. 2015, 503–524; Krmpotić et al. 2016, 59–94; Bulatović, Gori & Linden 2020, 1171–1177.

²⁶ Data used from the field journal for the years 1976 and 1980–1986, NBS.

structures characteristic of the Vučedol culture, the Vinkovci group built temporary dwellings. According to N. Tasić and M. Bondár, the settlements functioned as temporary habitations. At sites such as Vinkovci, Pećine near Vrdnik, Gradina on the Bosut, and at Somogyvár culture settlements in Hungary, smaller and medium-sized pits appear, which – under certain conditions – could have served as shelters.²⁷

It seems that the settlement at Gradina on the Bosut (as with most other Vinkovci settlements) developed horizontally and only rarely left vertical traces in the stratigraphic record. Fourteen pits are classified as fixed features at Gradina, whose fill contained Vinkovci material.²⁸ However, from a methodological standpoint, cultural attribution in some of these pits is not entirely clear, as they contained assemblages with culturally and chronologically diverse materials. It is assumed that the pits were used for waste disposal, storage, or as clay extraction areas.

Feature 60

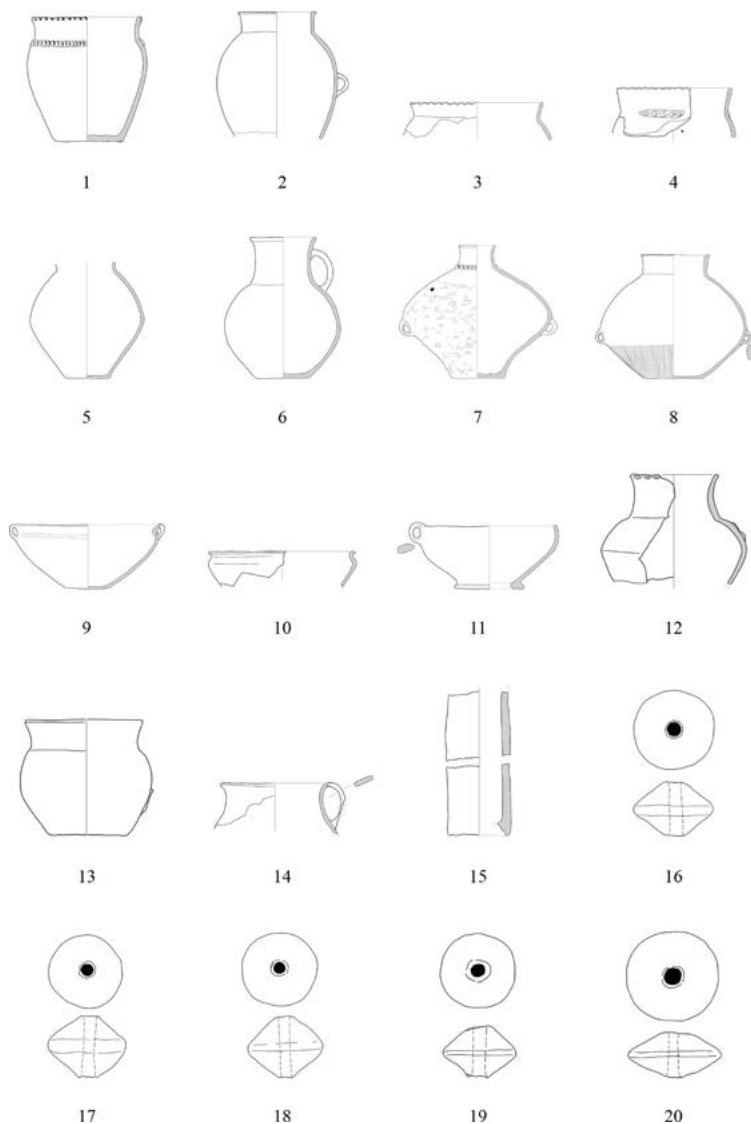
An ellipsoid pit (dimensions 1.3 x 1 m) excavated during the 1980 campaign, Sector II, Block A, Square 17, Columns III–IV, 22nd excavation layer. The pit was filled with scorched earth, fired daub, and ceramic finds from which several vessels were reconstructed. The contents included the remains of 15 vessels, most of which were reconstructed. The finds included amphorae, pots, jugs, bowls, and flask-shaped vessels. Several other fragments could not be fully identified or reconstructed. Most vessels showed signs of varying degrees of burning. The pit also contained bi-conical spindle whorls. The pit is typologically consistent (Pl. I).

Feature 61

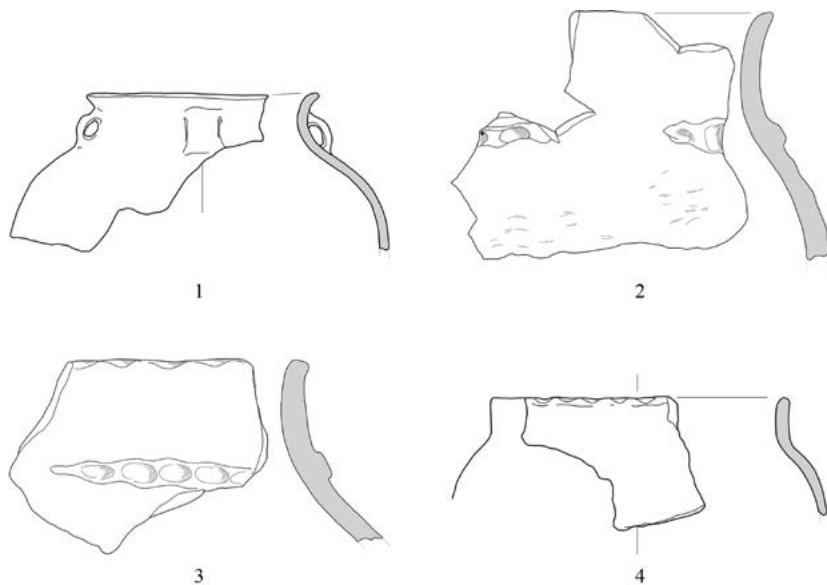
An ellipsoid pit (dimensions 1.2 x 0.85 x 0.45 m) excavated during the 1980 campaign, Sector II, Block B, Square 22, Columns II–III, 22nd–23rd excavation layers. The fill consisted of dark, scorched earth and river shells. The assemblage contained fragments of four large pots, some of which were decorated with applied bands bearing finger impressions (Pl. II).

²⁷ Dimitrijević 1966; Popović & Medović 1969, 35–36; Tasić 1983, 46; Bondár 1995, 236; Kulcsár 2009.

²⁸ Unfortunately, as of the time of writing this paper, we have not been able to locate the technical drawings of the referenced features.



T. I (1. pot, H- 20 cm, Ro- 16cm; 2. pot, 28 x 27 cm; 3. pot, 22 x 10 cm; 4. pot, 9 x 10 cm; 5. pot, H- 33 cm; 6. jug, H- 27cm, Ro-12 cm; 7. amphora, H- 40 cm, Ro- 10 cm, R belly- 55 cm; 8. pot, H 28 cm; 9. bowl, H- cca 10 cm, Ro- cca 60 cm; 10. bowl, 7 x 11 cm; 11. bowl, H- 12cm, Ro- 13.5 cm; 12. goblet, 10 x 10 cm; 13. goblet, 10 x 10 cm; 14. jug, 12 x 4.5 cm; 15. flask-shaped vessel, H- approx. 7 cm; 16. vertebra, H- 3.7 cm, R- 5.2 cm; 17. vertebra, H- 4 cm, R- 4.5 cm; 18. vertebra, H- 4.1 cm, R- 5 cm; 19. vertebra, H- 2.5 cm, R- 3.5 cm; 20. vertebra, H- 2.2 cm, R- 4.7 cm).



T. II (1. pot, 9 x 11.5 cm; 2. pot, 10 x 7.5 cm; 3. pot, 9.5 x 6.2 cm; 4. pot, 6.2 x 6 cm).

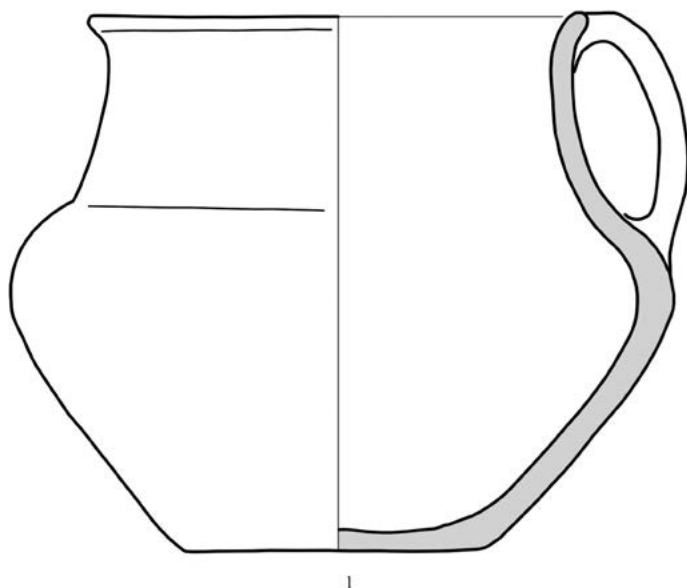
Feature 83²⁹

A pit (no recorded shape or dimensions) excavated during the 1981 campaign, Sector II, Block A, Square 18, Column III, 23rd excavation layer. The fill consisted of numerous atypical fragments of coarse pottery, mostly pots and bowls. The movable finds, based on fabric and ornamentation, belong to the Bosut IIIa and Bosut II horizons. A nearly complete jug with a strap handle was found in the upper level (Pl. III).

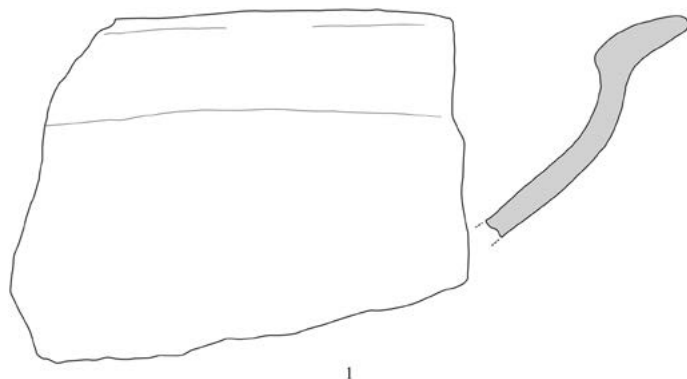
Feature 77

A pit (no recorded shape or dimensions) excavated during the 1981 campaign, Sector II, Block A, Squares 16–17, Column III, 23rd excavation layer. The fill was notably poor in ceramic and bone finds. Among a few atypical vessel fragments, one unornamented, black bowl fragment of fine fabric was found, on the basis of which previous researchers assigned the feature to the Early Bronze Age horizon (Pl. IV).

²⁹ The cultural attribution of Feature 83 is not entirely clear, as it represents a context containing culturally and chronologically diverse material.



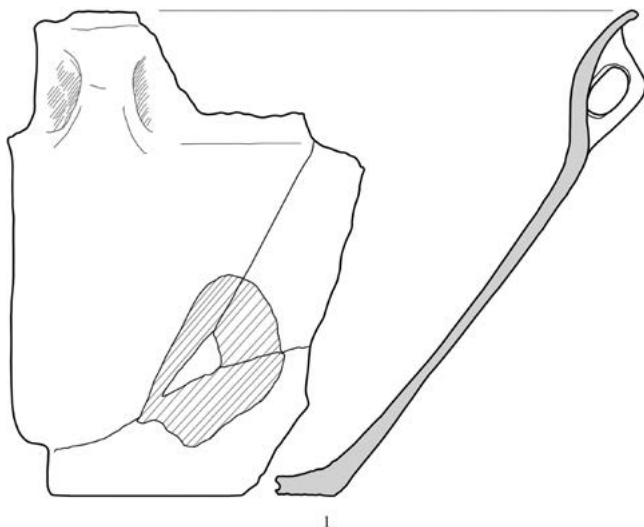
T. III (1. cup, H- 9.2 cm, Ro- 8 cm).



T. IV (1. bowl, 10.5 x 7.6 cm).

Feature 109

A circular pit (dimensions 2.05 x 0.40 m) excavated during the 1982 campaign, Sector II, Block B, Squares 21–22, Columns IV–V, 24th–26th excavation layers. The fill consisted of brown soil with atypical fragments of coarse pottery. Given the mixing of cultural layers, the movable finds (based on fabric and ornamentation) belong to both Bosut IIIa and Bo-



T. V (1. bowl, H- 12.5 cm).

sut II. The finds included a bowl with an outward-curving rim and a handle beginning below it, as well as a highly fragmented portion of a flask-shaped vessel (Pl. V).

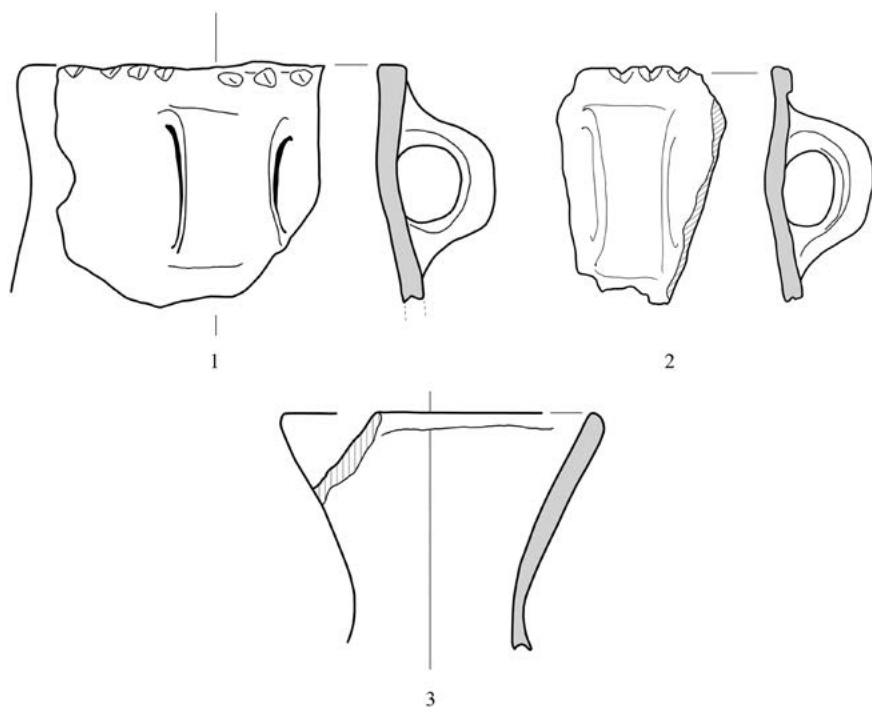
Feature 252

A circular pit (dimensions 0.93 x 0.40 m) excavated during the 1985 campaign, Sector II, Block C, Squares 29–30, Columns IV–V, 25th excavation layer. The fill consisted of darker soil mixed with low concentrations of soot and higher concentrations of ash in stratified layers. The pit floor was levelled, with a central circular depression measuring 0.55 by 10 cm. Finds included Vinkovci ceramic fragments, small pieces of scorched daub with impressions of woven materials, and a few animal bones. Notable finds included jug and amphora fragments (Pl. VI).

Feature 250³⁰

A circular pit (dimensions 0.90 x 0.45 m) excavated during the 1985 campaign, Sector II, Block C, Squares 27–28, Column IV, 25th excavation

³⁰ Unfortunately, as of the time of writing this paper, we have not been able to locate the documentation or drawings of the ceramic finds based on which the researchers culturally and chronologically attributed the feature to the Vinkovci cultural horizon.

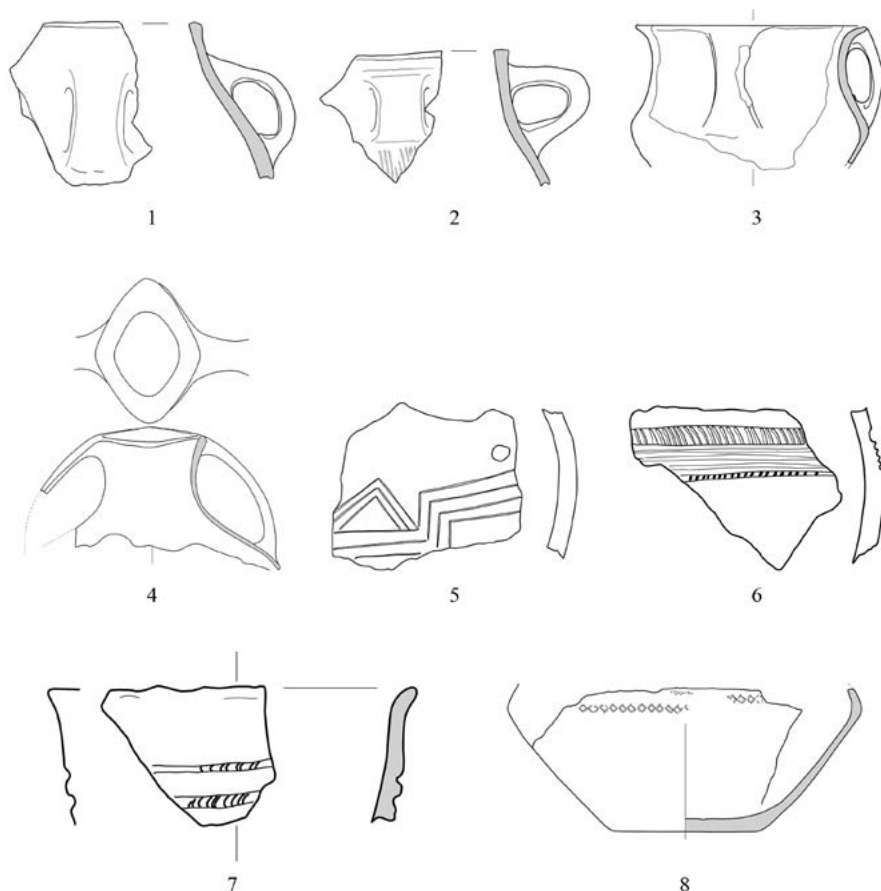


T. VI (1. jug, 6.5 x 6 x 8 cm; 2. jug, 5 x 7.5 cm; 3. amphora, 6 x 8 cm).

layer. The entire fill consisted of soil mixed with scorched building daub. The daub was compact and dense, often bearing impressions of wickerwork and thin supporting beams. Larger daub pieces measured up to 15 by 12 by 7 cm. Between the daub fragments and at the bottom, fragments of ochre-red bowls of varying profiles and fabric were found, along with fine dark grey pots.

Feature 253

A circular pit (diameter 1.07 x 0.5 m) excavated during the 1985 campaign, Sector II, Block C, Square 26, Column V, 26th excavation layer. The now famous and controversial fill consisted of daub fragments and ceramic finds which, based on typochronology, belong to the Vinkovci (Pl. VII/1–3), Vatin (Syrman–Slavonian variant), and South Transdanubian Encrusted Pottery cultures (Pl. VII/4–8). Field notes indicate that flotation was conducted and yielded very few animal bones and part of a roe deer antler. The excavation methodology and stratigraphic unit



T. VII (1. pot, 9 x 6 cm; 2. pot, 8 x 6.5 cm; 3. jug, 9 x 7 cm; 4. amphora, H- 12.7 cm, Ro- 12 x 9 cm; 5. bowl, 5 x 4 cm; 6. bowl, 6 x 2.2 cm; 7. bowl, 4 x 3 cm; 8. bowl, 25.2 x 23.5 cm).

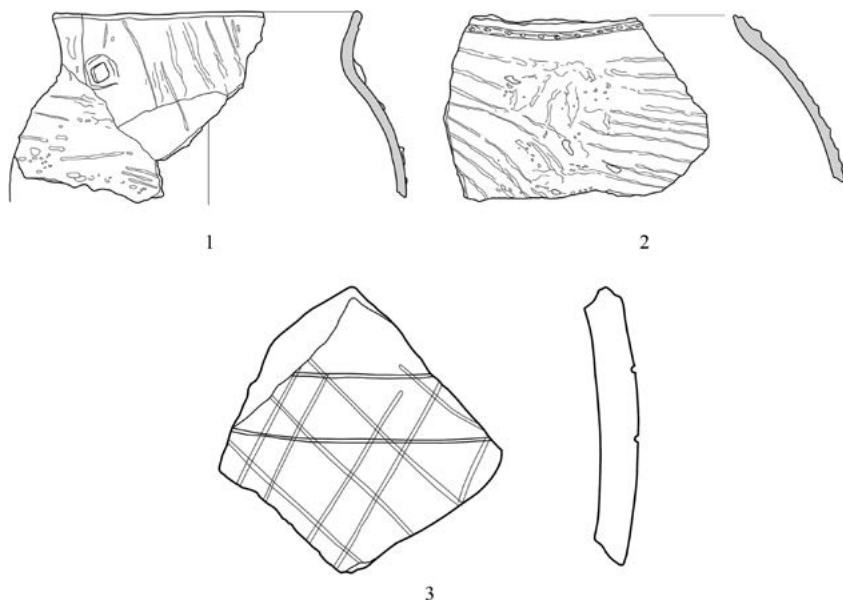
of this pit, as well as the precise positioning of the Vinkovci, Vatin, and Encrusted Pottery finds, remain unclear. Thus, we can only speculate or support the skepticism expressed by N. Tasić, who proposed that the presence of these finds indicates coexistence or importation of Vatin and Encrusted wares into a Vinkovci settlement.³¹ This thesis was supported by J. Petrović, who based her argument on Early Bronze Age grave goods

³¹ Тасић 1983, 50; Tasić 2003.

from Golokut, contemporary with early Vatin.³² However, H. Kalafatić draws attention to radiocarbon dates obtained by S. Forenbaher, which suggest that the Vinkovci and early Vatin cultures could not have significantly overlapped in time.³³ We believe it is necessary to tabulate all recorded finds from this feature. Vinkovci finds include fragments of a pot and a jug. The end of the Vinkovci culture remains unclear, and resolving its relationship to the Vatin culture will require new research and re-evaluation of old data.

Feature 251

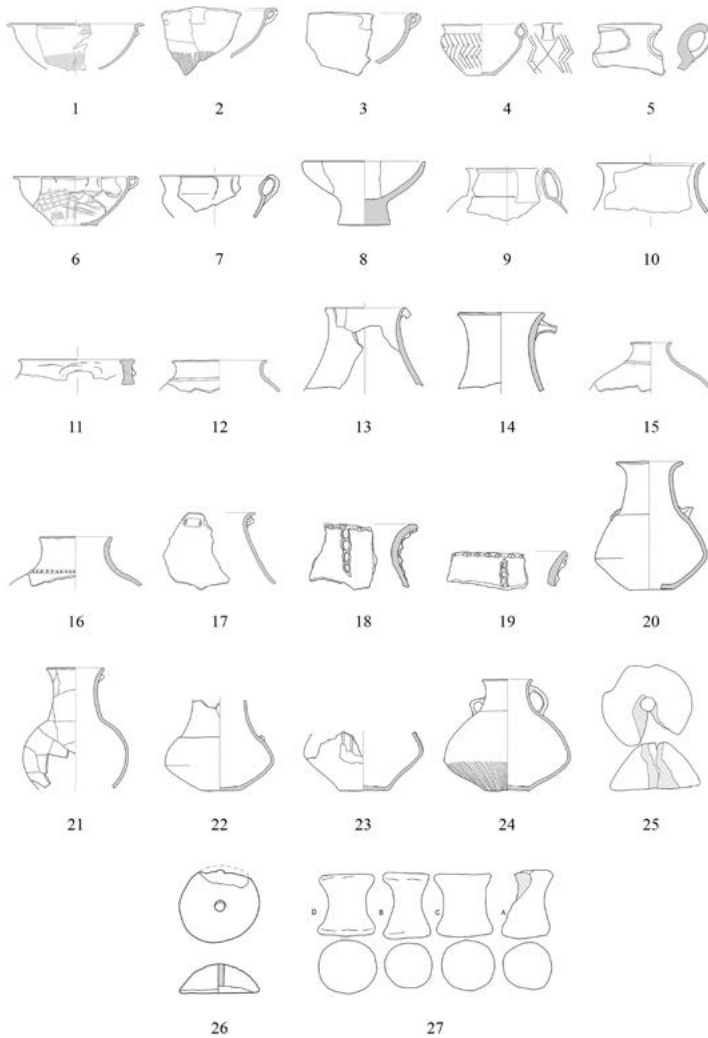
A circular pit (dimensions 1.75 x 0.50 m) excavated during the 1985 campaign, Sector II, Block C, Squares 26–27, Column IV, 25th excavation layer. The upper fill consisted of a layer with scorched building daub (25 cm deep), beneath which was darker soil mixed with soot, charcoal grains, and ceramic finds – primarily coarse pottery fragments of varying dimensions, including differently profiled and decorated pots. Ornamenta-



T. VIII (1. pot, 13 x 12.7 cm; 2. pot (pythos?), 16.8 x 11 cm; 3. bowl, 3 x 3.5 cm).

³² Petrović 1980, Petrović 1991.

³³ Forenbaher 1993; Kalafatić 2006, 21–24.



T. IX (1. bowl, 16.5 x 12 cm; 2. bowl, 16 x 13 cm; 3. bowl, 11.3 x 10.3 cm; 4. bowl, H- 18 cm; 5. bowl, 6 x 4 cm; 6. bowl, H- 8.7 cm, Rd- 6.5 cm; 7. bowl, 6 x 4.5 cm; 8. bowl, 7.7 x 11 cm, Rd 6 cm; 9. pot, 10.3 x 13 cm; 10. pot, 6 x 13.3 cm; 11. pot, H- 3 cm, R- 17.5 cm; 12. pot, 24 x 26 cm; 13. amphora, H-10.5 cm, Ro- 10 cm; 14. amphora, 7 x 8 cm; 15. amphora, Ro- 12 cm; 16. amphora, 11.5 x 12 cm; 17. amphora, 17 x 12 cm; 18. amphora (pot?) 7 x 7 cm; 19. amphora (pot?) 9 x 4.5 cm; 20. amphora, H- 13cm, R belly- 15.5 cm; 21. amphora, H- 23 cm, Ro- 11.5 cm; 22. jug, H- 13cm, Rd- 5.5 cm; 23. amphora, 16 x 13 cm; 24. amphora, H- 23 cm, Ro- 10 cm, Rd- 10 cm; 25. vertebra, 6 x 4.5 cm; 26. vertebra, 6 cm; 27. coils, A 3.2 x 2.8 cm; B 3.2 x 2.9 cm; C 3.5 x 2.5 cm; D 3.5 x 2.5 cm).

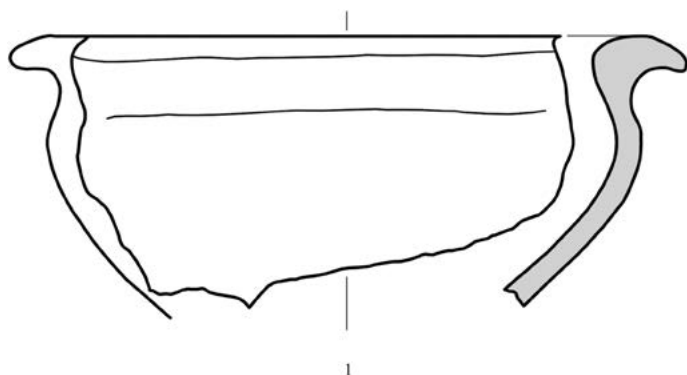
tion includes brush and barbotine decoration, applied plastic bands with finger or nail impressions, and button-shaped appliqués (Pl. VIII).

Feature 258

A circular pit (diameter 2 x 1.75 m) excavated during the 1985–86 campaign, Sector II, Block D, Squares 31–32, Columns IV–V, 25th excavation layer. The fill was dense, compact yellow clay mixed with daub fragments and soot. A substantial amount of ceramic material was recovered – vessels of various sizes, from small, profiled bowls and jugs with brush and barbotine decoration, to larger coarse pots. A fragment of an unornamented bowl with a pedestal, ceramic bobbins, a conical spindle whorl, and several animal bones were also found. At the pit floor, a compact layer was identified consisting of fragmented finds from various pots, amphorae, bowls, and goblets, showing mixing of Early Bronze Age and Copper Age ceramics (Pl. IX).

Feature 259

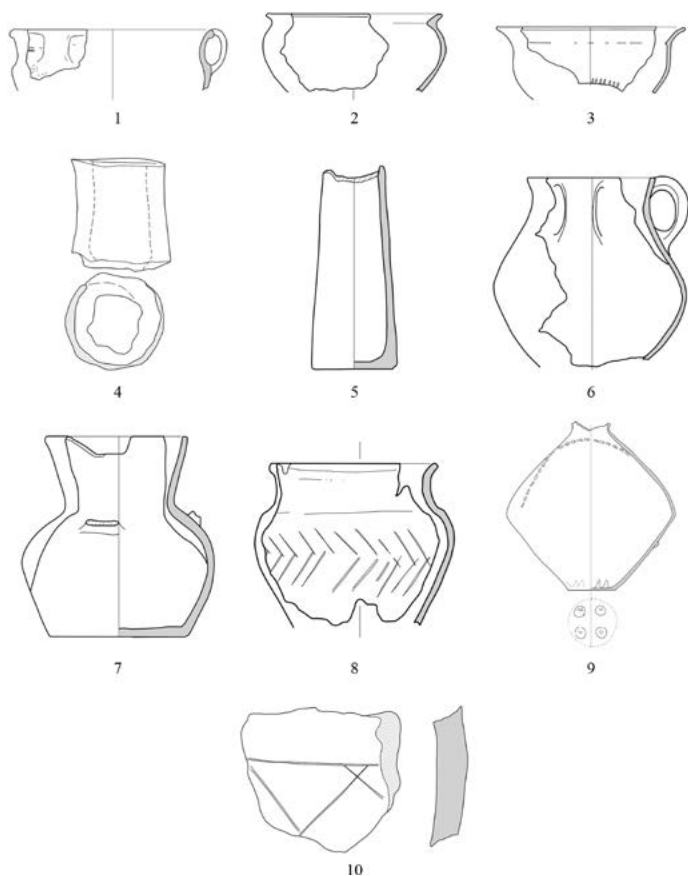
A circular pit (dimensions 1.25 x 0.50 m) excavated during the 1985 campaign, Sector II, Block C, Square 30, Columns III–IV, 25th excavation layer. A fragment of a stone quern was found at the base. The fill was dark soil mixed with many small daub pieces, animal bones, and charcoal particles. Few Early Bronze Age coarse ceramic finds were recovered, including a fragment of a bowl with a profiled rim (Pl. X).



T. X (1. bowl, 9.5 x 6.8 cm).

Feature 255

A circular pit (dimensions 1 x 0.50 m) excavated during the 1985 campaign, Sector II, Block C, Square 27, Columns III–IV, 25th excavation layer. The fill consisted of dark soil mixed with daub fragments and soot. Coarse ceramic fragments were recovered, including parts of bowls with profiled rims, flask-shaped vessels, jugs, and a large amphora at the pit bottom. Decoration includes applied plastic bands with finger/nail impressions, incisions, and barbotine (Pl. XI).



T. XI (1. bowl, 9 x 9.2 cm; 2. bowl, 12 x 8 cm; 3. bowl, 9 x 6 cm; 4. flaskoid vessel, H- 4.5 cm, Ro- 2 cm; 5. flaskoid vessel, H- 10.5 cm, Ro- 2.2 cm, Rd- 4 cm; 6. jug, 9.2 x 6.2 cm; 7. jug, H- 11.5 cm, Ro- 8 cm; Rd- 7.5 cm; 8. jug (pot?), 8 x 8.8 cm; 9. amphora, H- 47.5 cm, Ro- 10 cm, Rd- 14.5 cm, L- 47 cm; 10. fragment of abdomen, 6 x 5.5 cm).

Feature 248³⁴

An oven excavated during the 1985 campaign, Sector II, Block D, Square 35, Column IV, 24th excavation layer. The oven had a circular base in the horizontal section, with a sloped floor descending from the firing opening. Its diameter was 0.75 m. The base was partially preserved and shallowly dug into the loess-clay subsoil (25th layer). Rising from the floor were six square-sectioned columns supporting the hearth plate (grill); a seventh was damaged. The preserved columns were 33 cm tall and measured 13 by 12 cm. They were radially and symmetrically arranged around the hearth opening. The right column near the opening was triangular in cross-section. The front interior surfaces and tops of the columns were rounded, supporting a circular hearth plate, 11 cm thick, with arched recesses for resting on the columns, a central opening, and peripheral arched vents. The central opening measured 15 cm in diameter. The columns were joined by a thin wall of fired clay. The oven fill contained soot, charcoal, and sporadic amorphous ceramic finds. Behind the thin outer wall between the columns, the clay was fired up to 6 cm thick, with intensity decreasing toward the base level of the hearth. The columns were made of clay mixed with significant amounts of cereal chaff. In the surrounding layer, atypical Vinkovci ceramic finds were identified.

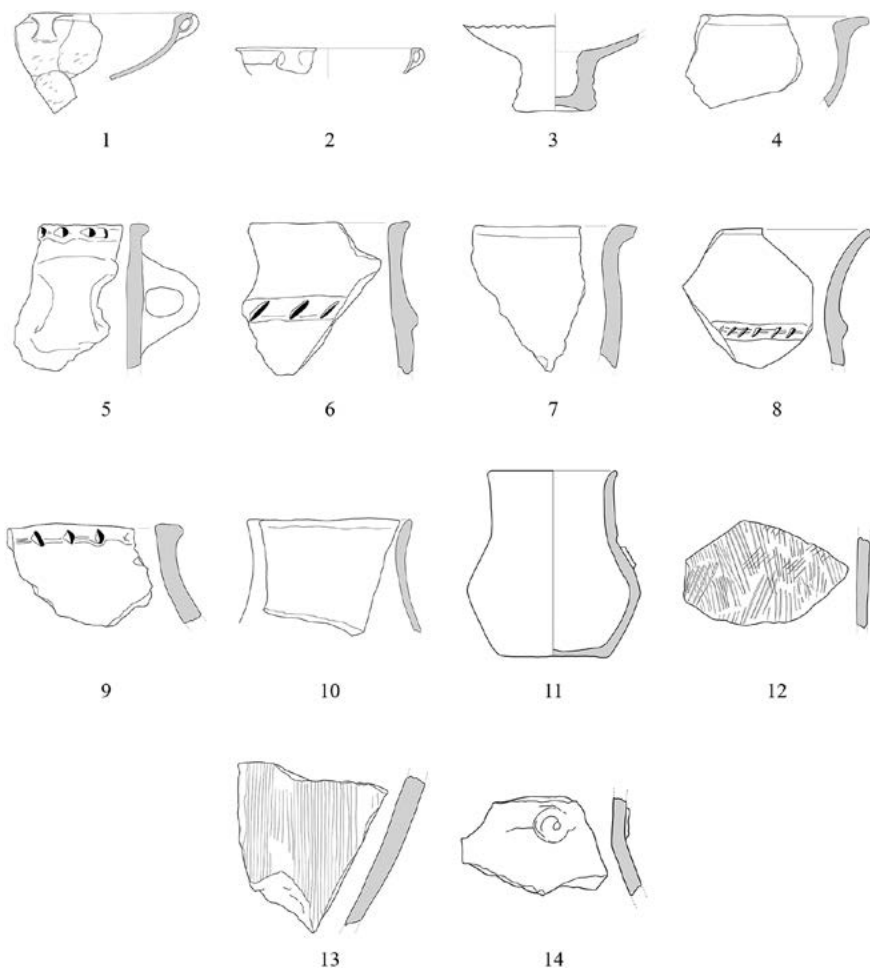
It is assumed that this area formed part of the settlement's craft-production zone.

**Description of the Excavated Surface at Gradina
from the 21st to the 25th Excavation Layer³⁵**

During the 1980 campaign, in Sector II, Block B, Squares 20–23, Columns II–VI, within the 21st excavation layer, archaeologists identified a sterile, brownish layer containing small lumps of fired house daub, reddish baked soil, and soot. In addition to the Feature 248 oven, another partially preserved oven (with no recorded shape or dimensions) was identified in the cultural horizon of the Early Bronze Age. In Square 23, Columns IV and V, within the 21st excavation layer, part of an oven was

³⁴ Beneath this oven lie the remains of Feature 247 from the Copper Age (Spasić 2011, 93–94).

³⁵ Data used from the field journal for the years 1976 and 1980–1986, NBS.



T. XII (1. bowl, 25 x 18 cm; 2. bowl, 15 x 6 cm; 3. bowl, 8 x 6 cm; 4. bowl, 7 x 5 cm; 5. pot, 9 x 5 cm; 6. pot, 6.3 x 6.8 cm; 7. pot, 7.7 x 5 cm; 8. pot, 8.5 x 9 cm; 9. pot, 6 x 4.5 cm; 10. pot, 8.5 x 7.5 cm; 11. pot, H- 11.5 cm, Ro- 8 cm, R bottom 7cm; 12. fragment of the pot belly, 9.5 x 7.5 cm; 13. fragment of the pot belly, 6 x 6 cm; 14. fragment of the neck, shoulder and pot belly, 8 x 5.2 cm).

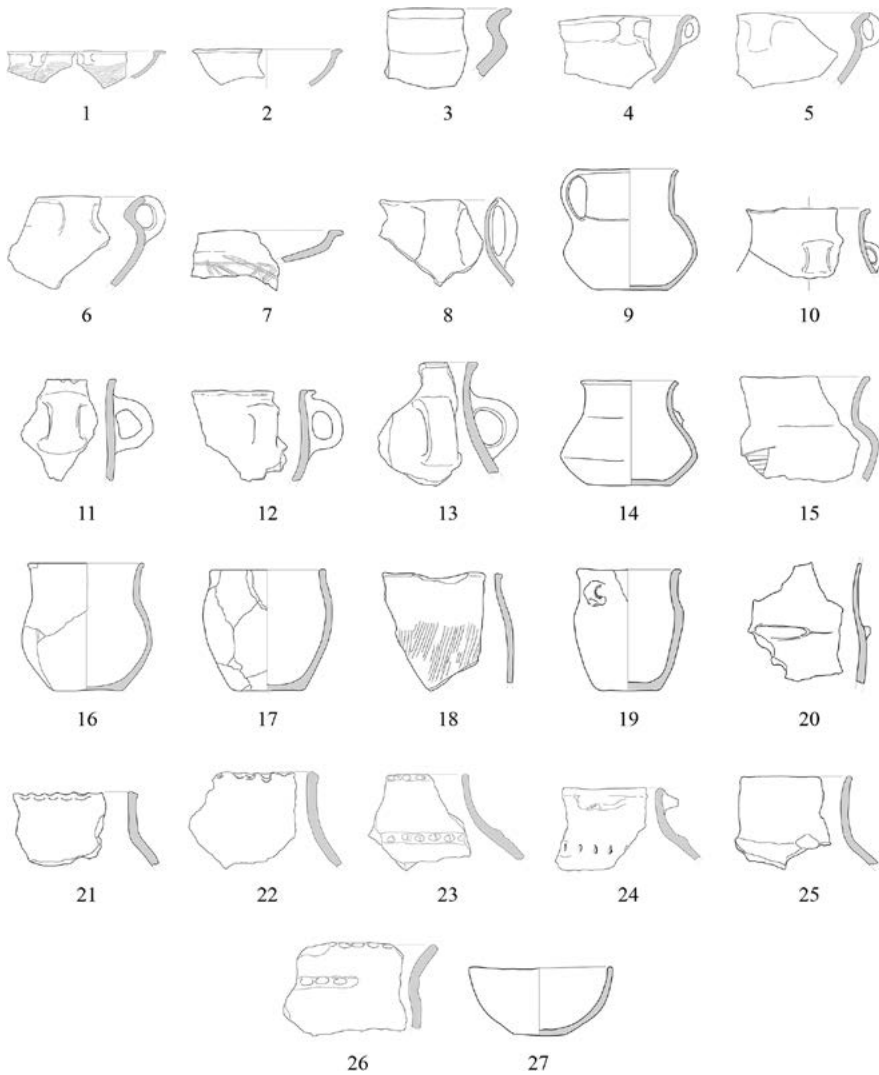
discovered with a partially preserved dome,³⁶ a hearth floor, and a base made of scorched and compacted yellow clay. In Square 22, Column V,

³⁶ Upon reviewing the documentation, we have not established that a number was assigned to this feature.

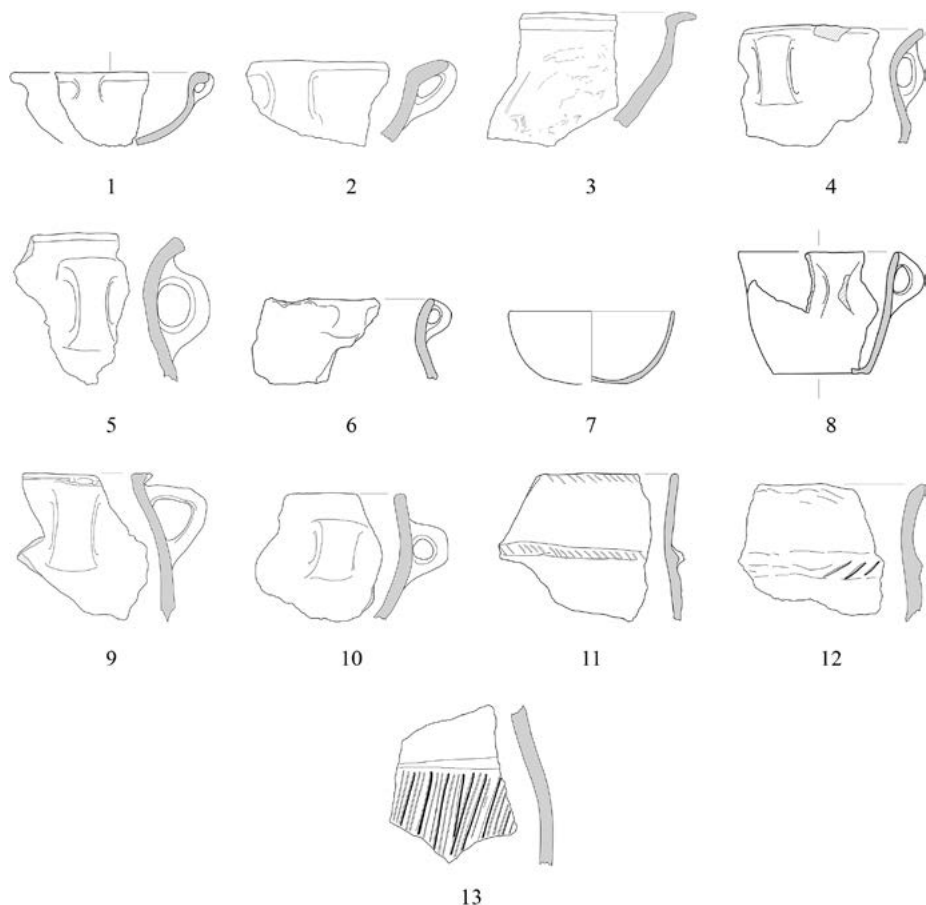
approximately 70 cm south-west of the oven and its base, a posthole lined with clay was uncovered (diameter: 38 cm). On this working surface – possibly a craft production zone – a small quantity of typical and atypical Vinkovci pottery was recovered, including fragments of bowls, jugs, and pots. Some were decorated with brush-like ornament or barbotine, while applied bands with finger or nail impressions appeared on vessel necks or rims (Pl. XII).

In Squares 21–23, Columns II–VI, within the 22nd excavation layer (campaigns of 1976, 1980, and 1984), a notably large quantity of primarily coarse grey and brown pottery was documented. The dominant forms included classic Vinkovci types: bowls with outwardly profiled rims and strap handles running from the rim to the short shoulder; jugs with strap handles and sharply biconical lower bodies; and pots with strap handles. In smaller numbers, highly fragmented amphorae with cylindrical necks and flask-shaped vessels were also recorded. Decoration was relatively rare and typically consisted of irregularly incised brush ornaments or barbotine on the lower parts of vessels, while applied bands with finger or nail impressions appeared on necks or rims. The assemblage is culturally consistent (Pl. XIII, XIV).

In Blocks C–D, Squares 26–35, Columns II–VI, within the 24th and 25th excavation layers (campaigns of 1981, 1984, and 1985), the layer surface sloped gradually along with the terrain from Square 26 to Square 35, with a height difference of approximately 60 cm. The layer consisted of light brown-yellow soil mixed with small pieces of house daub and other construction materials, some fragments bearing impressions of wattle. Both typical and atypical Vinkovci pottery was found in this layer; both fine and coarse fabrics were evenly distributed. Among the fine wares, the most frequent forms were small conical bowls with differently profiled rims and small handles positioned just below the rim. The bowl rims were profiled and curved outward. A notable concentration of bowl fragments was observed in Squares 26–27, Columns V and VI. Numerous fragments of classic Vinkovci conical bowls were identified, decorated with incised brush-like ornaments, along with fragments of pots. The ceramic fabric was of good quality, with thin walls and colours ranging from light yellowish tones to brown and reddish hues. Decoration included shallow incised brush-like ornamentation executed in radial, mesh, or oblique patterns and, in fewer instances, applied plastic bands or ribs with finger or nail impressions (rim or belly decoration). Several



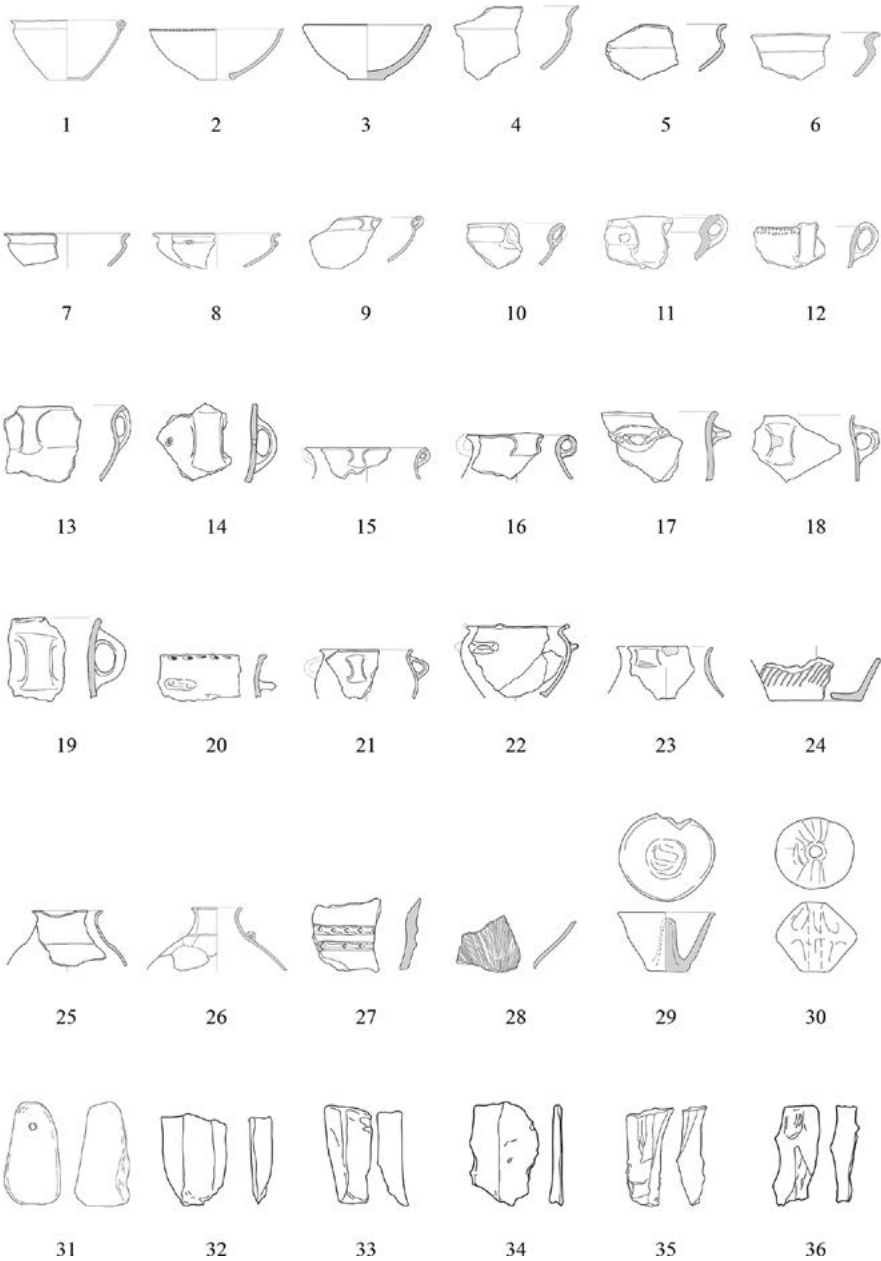
T. XIII (1. bowl, 26.7 x 17.8 cm; 2. bowl, 13 x 7.2 cm; 3. bowl, 5.5 x 4 cm; 4. bowl, 8 x 6.5 cm; 5. bowl, 9.3 x 5.2 cm; 6. bowl, 8.7 x 7.5 cm; 7. bowl, 9.4 x 6 cm; 8. jug, 7 x 6 cm; 9. jug, H- 12 cm, Ro- 9.5 cm, Rd- 6.5 cm; 10. pot, 12 x 8 cm; 11. pot, 5.3 x 6.3 cm; 12. pot, 7.5 x 4.3 cm; 13. pot, 9 x 7 cm; 14. jug, H- 9 cm, Ro- 8.5 cm, Rd- 7 cm; 15. pot, 6.5 x 7.3 cm; 16. pot, H- 8 cm, Rd- 5.2 cm; 17. pot, 11.3 x 9 cm; 18. pot, H- 12.5 cm, Rd- 6.8 cm; 19. pot, 8.5 x 7.5 cm; 20. pot, H- 10 cm, Rd- 5 cm; 21. pot, 9.6 x 7.5 cm; 22. pot, 9.5 x 9 cm; 23. pot, 10.5 x 8.7 cm; 24. pot, 10 x 9.6 cm; 25. pot, 10.7 x 7.3 cm; 26. pot, 10.2 x 7.8 cm; 27th bowl, H- 5.5 cm, Ro- 12 cm, Rd- 3.7 cm).



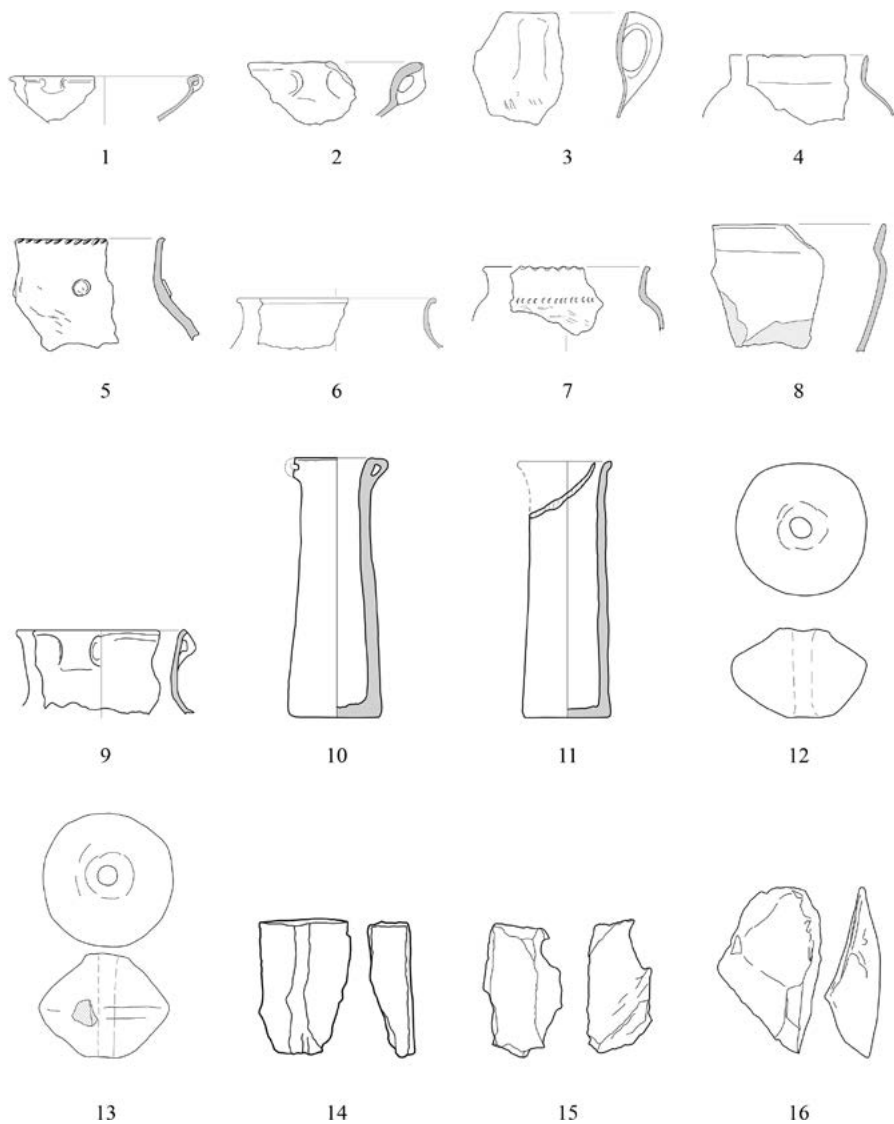
T. XIV (1. bowl, 8.7 x 7.5 cm; 2. bowl, 5 x 8.2 cm; 3. bowl, 8 x 8 cm; 4. pot, 5.3 x 5.5 cm; 5. pot, 8 x 6.5 cm; 6. pot, 4 x 3 cm; 7. pot, H- 7.8 cm; 8. bowl, H- 5 cm, Ro- 10 cm, Rd- 2.2 cm; 9. pot, 8 x 9 cm; 10. pot, 7 x 7.2 cm; 11. pot, 12 x 11.5 cm; 12. pot, 7.3 x 6.4 cm; 13. pot, 8.5 x 7 cm).

flint tools were recovered, along with a small quantity of large animal bones from both domestic and wild species. In this research zone (24th and 25th excavation layers), no fixed features were present, as all previously identified features had been fully excavated by the 23rd layer (Pl. XV).

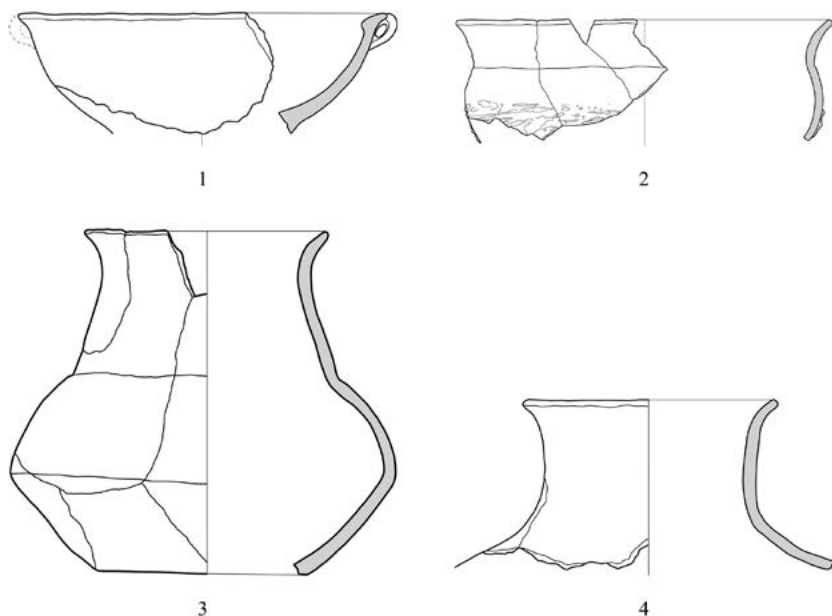
The surface in the 25th and 26th excavation layers, Squares 26–35, Columns III and IV, represents the terminal and lowest cultural horizon at the site, partially extending into the subsoil (campaign of 1985). In



T. XV (1. bowl, H- 18 cm, Rd- 17.5 cm; 2. bowl, 30 x 15.5 cm; 3. H- 2.5 cm, Ro- 5.5 cm, Rd- 1.5 cm; 4. bowl, 15 x 13 cm; 5. bowl, 6.4 x 6.3 cm; 6. bowl, 9.5 x 5.5 cm; 7. bowl, 9 x 7 cm; 8. bowl, 9.5 x 7.2 cm; 9. bowl, 12 x 9 cm; 10. bowl, 6 x 5.7 cm; 11.



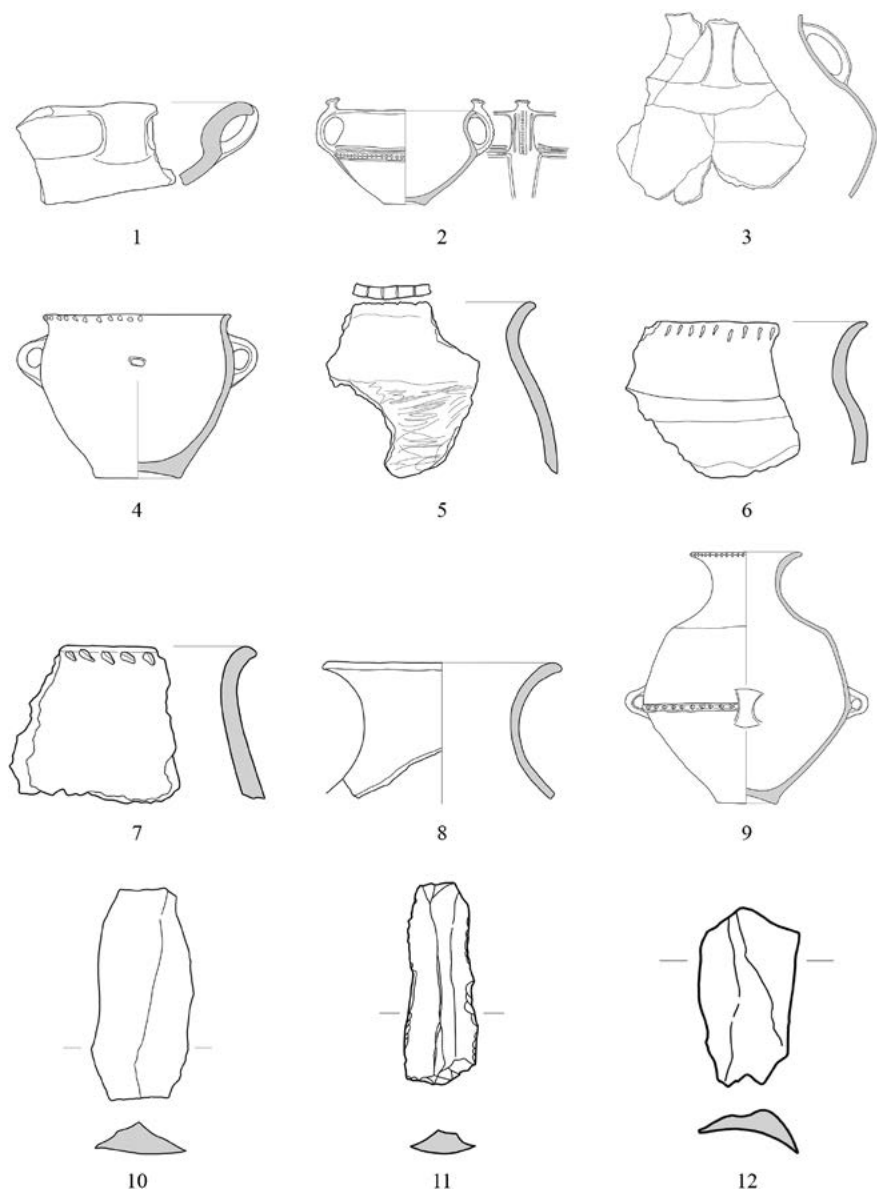
T. XVI (1. bowl, 8 × 7.3 cm; 2. bowl, 8.5 × 6 cm; 3. cup (small pot), 5 × 5.5 cm; 4. pot, 8.2 × 6.2 cm; 5. pot, 7.3 × 7 cm; 6. pot, 10.5 × 5.5 cm; 7. pot, 8.9 × 7 cm; 8. small pot, 5.7 × 5 cm; 9. pot, dimensions unknown; 10. flask-shaped vessel, H – 12 cm, Ro – 3.5 cm, Rd – 4 cm; 11. flask-shaped vessel, H – 11.5 cm, Rd – 3.6 cm; 12. spindle whorl, 4 × 2.5 cm; 13. spindle whorl, 4 × 5.5 cm; 14. stone tool, 2.3 × 1.5 cm; 15. stone tool, 2.1 × 1.5 cm; 16. core, 4.6 × 2.8 cm).



T. XVII (1. bowl, 12 × 7 cm; 2. bowl, 19 × 11.5 cm; 3. jug, H – 10.5 cm; 4. amphora, 6.5 × 13 cm).

Block C, Squares 26–30, Columns II–VI, only isolated ceramic fragments were found. The number of ceramic finds was significantly reduced compared to the previous layer, especially in Columns III–IV of Block C. Vinkovci pottery still dominated numerically, although in Squares 26–28, sporadic typical Lengyel and Boleráz ceramics were also found, exhibiting a wide range of forms, fabrics, and decoration techniques. The finds included fragments of bowls, jugs, pots, amphorae, flask-shaped vessels, spindle whorls, and flint tools. A small number of bones from wild and domestic animals were recovered, along with fragments of a stone quern (Pl. XVI).

During the 1986 campaign, two additional refuse pits were discovered, though without recorded shapes or dimensions (Features 264 and 266), both defined as belonging to the Vinkovci cultural horizon based on the finds from their fill. The only currently known information is that Feature 264 was located in Sector II, Block D, Squares 31–32, Columns IV–V, 26th excavation layer; and Feature 266 was in Sector II, Block D, Square 35, Columns V–VI, 27th excavation layer. These pits contained



T. XVIII (1. bowl, 5.3 × 4 cm; 2. bowl, H – 13.6 cm, Ro – 20 cm, Rd – 6.5 cm; 3. pot, 34 × 32 cm; 4. pot, H – 10.5 cm, Ro – 12 cm, Rd – 5.5 cm; 5. pot, 9 × 8 cm; 6. pot, 8 × 7.2 cm; 7. pot, 6 × 6 cm; 8. amphora, 12 × 21 cm; 9. amphora, H – 47 cm, Ro – 21 cm, Rd – 12 cm; 10. stone tool, 4.5 × 2 cm; 11. stone tool, 3.3 × 1.2 cm; 12. stone tool, 2 × 1.2 cm).

numerous fragments of typical Vinkovci conical bowls, amphorae, pots, and jugs with tall cylindrical necks. The ceramic fabric was of good quality, with thin walls and colour tones ranging from light yellowish to brown and reddish. Decoration included shallow incised brush ornaments (radial, mesh, or oblique) and, in fewer cases, applied plastic bands with finger or nail impressions. Three flint tools were also recovered (Pl. XVII and XVIII).

Conclusion

In the many dozens of major and minor syntheses published over the past fifty-plus years by scholars from Central Europe and the Western Balkans concerning the beginning of the Early Bronze Age in southern Pannonia, Slavonia, and Syrmia, one recurring issue has been the absence of published archaeological material from the Early Bronze Age community at the Gradina site on the Bosut. The reasons for this situation will not be discussed here; instead, attention is drawn to those who deserve credit for discovering the site in the first place.

Based on all that has been presented in this study, it may be concluded that the communities of the Vinkovci culture selected a strategically favourable location for founding the settlement at Gradina on the Bosut – just as they did at other sites such as Ilok, Vučedol, Vinkovci, Osijek, Szarvas, and Belegiš. Given that large-scale excavations have not been undertaken at those other settlements, and that protective excavations have only covered their peripheral zones, it is currently not possible to discuss inter-settlement relations in more detail.

The excavated peripheral areas of Gradina on the Bosut reveal an organised part of the settlement, with semi-subterranean pits (which may have served as short-term dwellings or workshops), ovens, and economic spaces between the pits. The most numerous finds from the Vinkovci settlement at Gradina consist primarily of ceramic vessel fragments and (un)processed animal bones. These predominantly pastoral communities also engaged in pottery production, textile processing, hunting and, to a lesser extent, agriculture.

Luxury finds discovered within the settlement belong to the group of gold artefacts, with raw material analyses indicating origins in the Carpathian mining regions – evidence of early long-distance trade. Further-

more, these finds suggest that there were individuals (perhaps more than one) within the community who may have expressed their social status through ownership of valuable possessions.³⁷

The organisation of the protective excavation project at Gradina (1964–1965 and 1975–1988) was entrusted to some of the most distinguished experts in Yugoslav and Serbian archaeology, as well as to the institutions they represented. We wish to take this opportunity to honour and express our deep respect and gratitude to the late Nikola Tasić, the late Petar Milošević, the late Dragan Popović, the late Predrag Medović, and many other colleagues from the Institute for the Protection of Cultural Monuments of Srem in Sremska Mitrovica, the Museum of Srem in Sremska Mitrovica, the Sava Šumanović Gallery in Šid, the Provincial Institute for the Protection of Cultural Monuments of Vojvodina in Novi Sad, the Museum of Vojvodina in Novi Sad, the National Museum in Kikinda, the City Museum in Sombor, the Institute of Balkan Studies of the Serbian Academy of Sciences and Arts in Belgrade, and the Archaeological Institute in Belgrade.

This paper is dedicated to Nikola Tasić and the entire archaeological team at Gradina on the Bosut (Fig. 5).



Figure 5. Expert team of the Gradina na Bosut project, circa 1978 (Sremac 2014b, 5).

³⁷ Ložnjak Dizdar 2021, 31–38; Blečić Kavur & Mitrović 2023.

I extend my sincere gratitude for the collaboration and invaluable assistance in processing the finds, above all to director Slavica Varničić and all the staff of the Simeon Piščević Public Library in Šid, who care for the Regional Archaeological Collection of Gradina on the Bosut, as well as to the students of archaeology from the Faculty of Philosophy, University of Belgrade.³⁸

I also express my thanks for the expert guidance, advice, and exceptional technical preparation of the plates to my colleagues Aleksandar Bulatović from the Archaeological Institute in Belgrade, Slobodan Tripković, and Slobodan Popović from the National Museum of Serbia.

³⁸ Special thanks to Ana Gavrilović, Duška Radosavljević, Marija Cerović, Jovana Ive-
lić, Ksenija Milenković, Jovana Šarenac, Petar Golubović, Maša Bogojević, Anastasija Stoj-
anović, Anastasija Brančić, and Jovana Petrović.

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Mirko Peković*

Military Museum

Belgrade, Serbia

Findings of Encrusted Pottery of the Szeremle Group in the Serbian Danube Valley

Abstract: At the end of Br A2 and the beginning of phase Br A3, the penetration of the Mad'arovce culture into the area of the Northern group led to significant changes and the movement of its bearers through the area of the Vatyá culture to the south. South of the mouth of the Sió river and in the southern parts of the confluence of the Danube and Tisza rivers, under the influence of Southern and Northern Danube region encrusted pottery, the Szeremle group will be formed, a style or phase in the development of encrusted pottery whose decorative repertoire will be dominated by motifs from the Northern Danube, and to a much lesser extent by those from the Southern Danube pottery. The end of the Early and the beginning of the Middle Bronze Age on the territory of Serbia, that is, in the south-western and southern parts of Bačka, in certain localities in Srem and southern and south-eastern Banat, will be marked by the appearance of Szeremle encrusted pottery.

Key words: Szeremle group, encrusted pottery, typological-stylistic analysis, Bronze Age, Danube valley

Introduction

In the developed and late Bronze Age, groups with encrusted pottery occupy a special place. Their areas of occupation are related to the Danube valley, to almost the whole of Pannonia and the hinterland, as well as from the western Pannonian Danube valley to the region directly east of the Đerdap gorge, the Danube side of Oltenia and north-western Bulgaria. With their development and close contacts with other cultural groups, they are, without a doubt, closely connected with the Balkan–

* pekovic_mirko@yahoo.com

Pannonian area. However, the general characteristics of this group clearly distinguish it from other groups in the area because, among other things, a completely different decorative style related to geometric ornamentation appears in them. Also, in the Bronze Age of South-eastern Europe, this is a unique example of the development of figurative plastic on a significant scale, which is linked to religious cult performances.

Due to the complex ethnic and cultural movements that affected the largest part of the Carpathian basin at the end of the Early and the beginning of the Middle Bronze Age, there was a migration of groups with encrusted pottery to the territory of the Croatian and Serbian Danube valley. In that area, this pottery first appears in a limited volume, as an import, and then it will become a dominant occurrence in this secondary, very strong, and long-lasting centre. In this territory, two styles or two regional groups of encrusted pottery developed: northern and southern. In the Northern group, which covered the area of north-eastern Croatia and part of western Bačka, whose beginnings came somewhat earlier, the characteristic shapes of the vessels partly stem from the Eneolithic and Early Bronze Age, and the decoration on the vessels is much more modest. In the Southern group, which spread in the Romanian and Serbian part of Banat, in the difficult to access Đerdap gorge from Golubac to Ključ, and on the tamer lower plateaus from Kladovo to Prahovo, in Oltenia and north-western Bulgaria, there is much richer decoration. The ornaments are grouped on the most prominent parts of the vessels, and made with white encrustation on a brown or dark base. This ornamentation can be seen in a simplified form at the end of the Bronze Age and the beginning of the Iron Age in the cultures east of the Đerdap gorge.

On the territory of Serbia, three groups with encrusted pottery have been distinguished: Southern Danube encrusted pottery, pottery of the Szeremle group, and of the Dubovac–Žuto brdo group. They are placed in the chronological framework of 1800/1700 to 1200/1100 BC. Southern Danube pottery is the most clearly visible, while pottery of the Szeremle and the Dubovac–Žuto brdo groups are significantly different from those of the Southern Danube, although there are common elements that are noticeable in the shapes of tiered vessels and bowls, and especially in the manner or style of decoration.

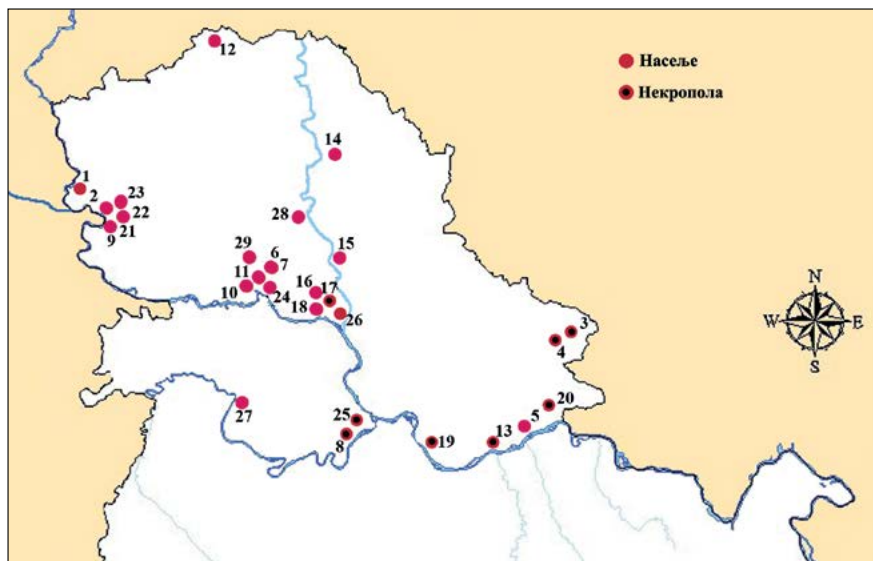
Sites of the Szeremle group

In the area between the Danube river, lake Balaton and further towards the northern parts of the Carpathian basin, at the end of the Early Bronze Age, a core of cultures with encrusted pottery was formed – the early phases of Vátya, Hatvan–Tokod, the early phase of Southern and Northern Danube pottery. The penetration of the Mad'arovce culture into the area of the Northern Danube group with encrusted pottery caused their movement through the area of the Vátya culture to the south. South of the mouth of the river Sió and in the southern parts of the confluence of the rivers Danube and Tisza, the fusion of forms of Southern and Northern Danube pottery will form the Szeremle group, a style or phase in the development of encrusted pottery.¹ With further migrations to the area between the Danube and the Drava rivers, until the appearance of the Hügelgräber culture, Szeremle and the Southern Danube group coexisted, as evidenced by findings from several sites from this area. Further movements of the bearers of this style took place towards the south and can certainly be traced to the confluence of the Sava and the Danube rivers.

In the territory of Serbia, encrusted pottery of the Szeremle group is present in the south-western and southern parts of Bačka, in certain localities in Srem, and southern and south-eastern Banat (Map 1).

During reconnaissance or minor sounding excavations of certain localities, encrusted pottery of the Szeremle group was discovered in south-western and southern Bačka, and therefore no reliable conclusion can be drawn about the stratigraphy of these localities. A clearer stratigraphic picture was provided by several systematically investigated sites in southern Bačka. At a settlement from the Bronze Age, Feudvar, encrusted Southern Danube and Szeremle group pottery was found together with Vatin pottery. Near that settlement, on Stubarlija, a Middle Bronze Age necropolis was explored, within which several graves belonging to encrusted pottery were discovered. In the lowest layers of the settlement of the Vatin culture, on Popov Salaš, apart from the Vatin pot-

¹ Mozsolics 1957, 145. In that work, Mozsolics singles out the Szeremle group for the first time in the area between the Danube and the Tisza rivers. Based on mobile material from 18 localities, Bándi and Kovács considered that these ceramic types have a characteristic physiognomy, and that they can be distinguished as a separate group, Bándi & Kovács 1970, 27–28.



Map 1. Pottery finds of the Szeremle group in Serbia

1. Apatin, Sombor; 2. Bogojevo, Šuma, Sombor; 3. Veliko Središte, Ludoš, Vršac; 4. Vršac, At, Vršac; 5. Dubovac, Vršac; 6. Žabalj, Trasa, Novi Sad; 7. Žabalj, Višnjik, Novi Sad; 8. Jakovo, Kaluđerske livade, Surčin; 9. Karavukovo, Krčevine, Sombor; 10. Kać, Popov salaš, Novi Sad; 11. Kać, Čenej, Novi Sad; 12. Kelebija, Subotica; 13. Kovin; 14. Krstur, Bajir, Kikinda; 15. Kumane, Pumpa, Zrenjanin; 16. Mošorin, Siget, Titel; 17. Mošorin, Stubarlija, Titel; 18. Mošorin, Feudvar, Titel; 19. Omoljica, Staro selo, Pančevo; 20. Orešac, Selo, Vršac nekropola; 21. Odžaci, Karavukovačke livade, Sombor; 22. Odžaci, Klisa, Sombor; 23. Odžaci, Filipovačke livade, Sombor; 24. Ravno selo, Novi Sad; 25. Surčin, Beograd; 26. Titel, strana od Tise, Titel; 27. Hrtkovci, Gomolava, Ruma; 28. Čurug, Slatine, Žabalj; 29. Šajkaš, Salašina, Novi Sad.

tery with features of the Ottoman culture, fragments of encrusted Southern Danube and Szeremle group pottery were also discovered.

Encrusted pottery of the Szeremle group was also discovered during the research of several important sites in Srem. A characteristic beaker of the Szeremle style was also discovered at the Gomolava site near Hrtkovci in layer IVa, with Vatin and Southern Danube pottery. Also, this pottery was found at the necropolis in Surčin, from which no data on the burial units have been preserved, nor have the finds from the necropolis

been published in their entirety. At the site of Kaluđerske Livade, between the villages of Jakovo and Surčin, in grave 69, with a vessel of the older phase of the Belegiš culture, a fragmented bowl characteristic of the pottery of the Szeremle group was found as an accessory.

Also, in southern Banat, Szeremle pottery was discovered at several sites. In the late 19th or early 20th century, smaller excavations were carried out at the Kovin and Ludoš sites, from which pottery of this group was also collected. In the necropoleis of the At, Orešac, and Staro Selo sites near the village of Omoljica, several graves were investigated (eight at At, three at Orešac, and one at Omoljica), containing a large number of vessels with features of the Szeremle group.

Typological analysis of Szeremle pottery

The pottery of the Szeremle group is made of more or less refined clay mixed with fine-grained sand, fired unevenly, and the colours vary from reddish-dark brown, dark grey to grey. In addition to being rough and unpolished, the outer surface of the vessels is mostly polished, and some of the vessels, such as bowls and amphorae, can be polished and have a fine coating of clay. Ornamental motifs are mostly simple but can be quite diverse. Ornamentation is made by incising, embossing, grooving, while the one by ravishing is absent. Also, the decoration of the inner opening of the vessel appears for the first time.

According to the functional forms, the mobile archaeological material of Szeremle encrusted pottery at the sites in Serbia can be divided into several basic forms: tiered amphorae-urns, pots-urns beakers, and bowls.

Amphorae-urns

This type of vessel was discovered at several sites in Bačka, Srem, and southern Banat, and it mainly comes from graves (Table 1).

Amphorae-urns are generally smaller in size, although there are examples that are of the usual size when it comes to this type of vessel. They are made of less purified clay. Undecorated amphorae have rough outer surfaces, while ornamented ones have thinner walls and partially polished outer surfaces. They are unevenly baked, and their colours vary from dark grey to grey. Their shape is quite unified. They are biconical,



Table 1. Types of SzereMLE amphorae-urns in Serbia.

with a horizontally expanded rim, a funnel-shaped neck, and a rounded shoulder which, in the narrowed part, towards the transition to the accentuated belly, joins two or four vertically placed ribbon handles. The belly from the widest part towards the bottom, which is narrower and straighter, generally has a conical shape. Some profiles of the amphora differ to a lesser extent, that is, the shoulder of the vessel can be somewhat steeper, and the belly more or less accentuated in the lower part, and in some cases slightly rounded. Also, only on one amphora from Surčin, with identical profiles, four ribbon handles with a root on the shoulder are semicircularly cut into the rim of the vessel.²

Amphorae-urns can be decorated with a rough grooved or incised ornament, which is placed in the lower part of the belly and never reaches the bottom of the vessel. In the case of ornamented vessels, horizontal and vertical zones are combined, that is, several horizontal rows of incised lines can be supported by rows of regularly spaced vertical incised lines, which in turn usually end with embossed circles. The interior of the

² Brunšmid 1904, 201; Пековић 2013, 107.

vessel is also decorated by incising oblique connected lines, and the outer edge of the rim with a series of short notches.

At the sites in Bačka, these vessels were found in the vicinity of Subotica, Sombor (Pl. 1/1–2), in Srem at the site Surčin (Pl. 2/10–11), and in Banat at the sites of Orešac,³ At, and Kovin (Pl. 4/8–11, Pl. 6 /1–3, 12–13 Pl. 7/10–11, Pl. 8/1–2).

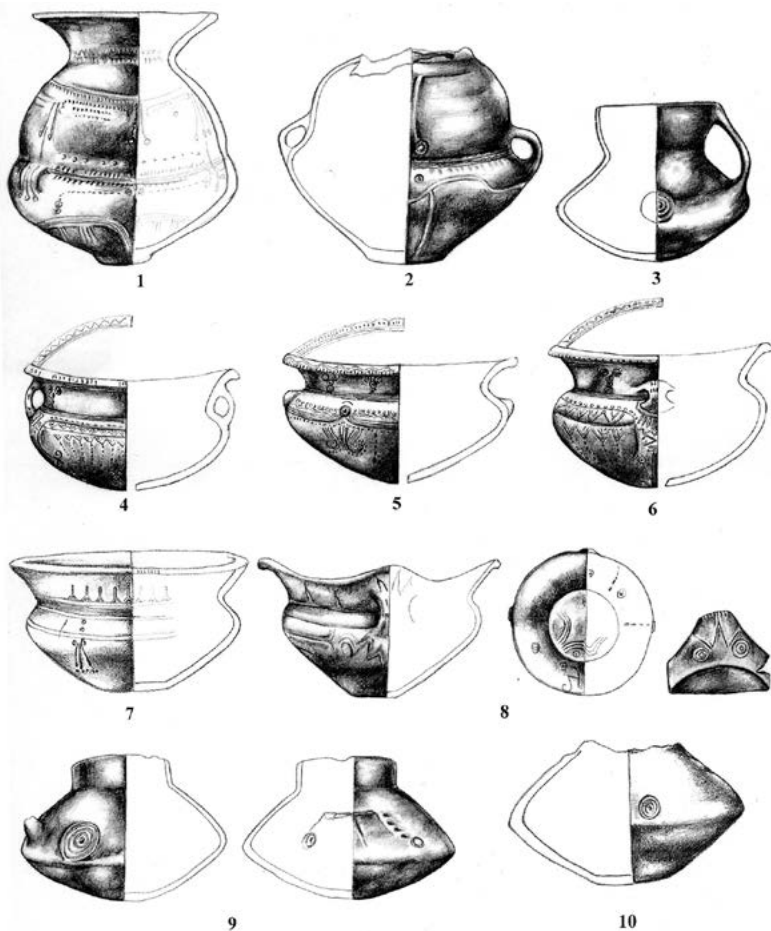


Plate 1. Sombor, Apatin: 1; Subotica: 2–3; Odžaci, Karavukovačke livade: 4; Odžaci, Filipovačke livade (according to S. Karmanski): 5–6; Kać, Popov salaš: 7; Kać, Popov salaš (according to N. Tasić): 8–10.

³ Крстић 1962, 87.

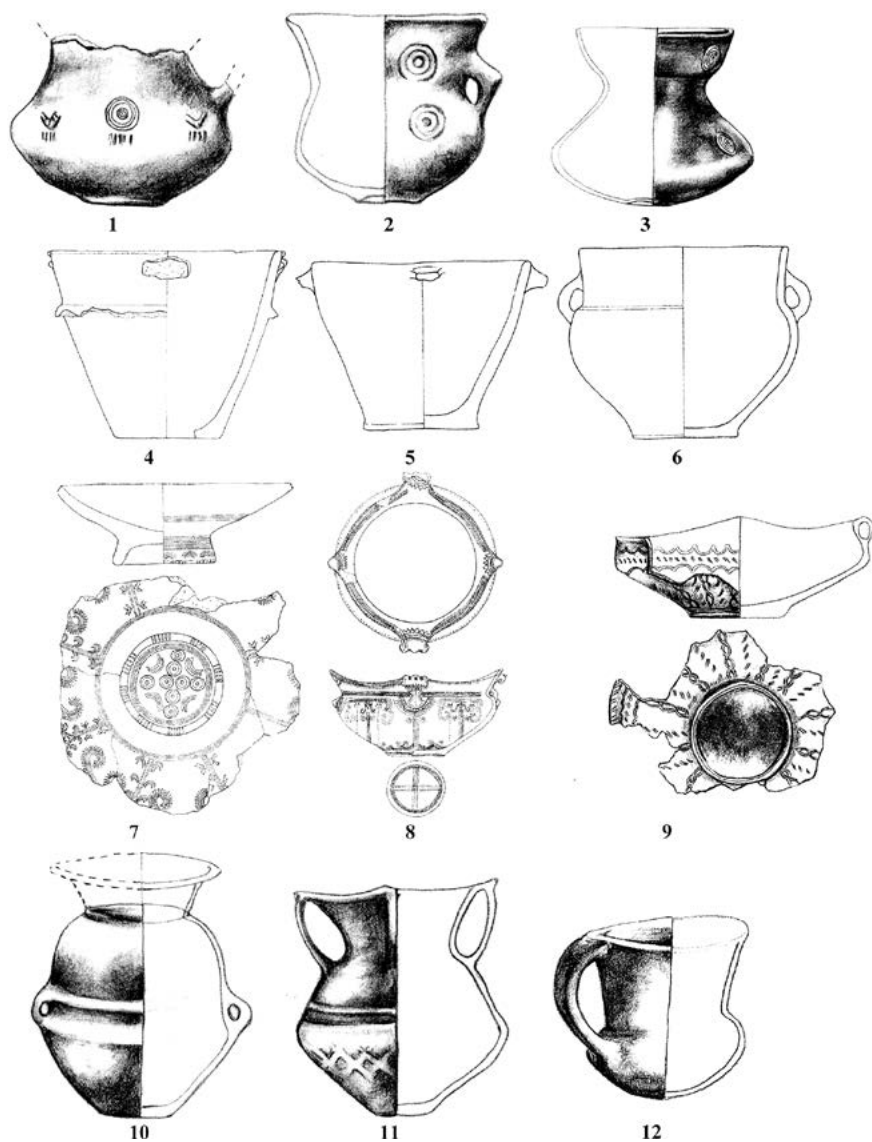


Plate 2. Mošorin, Feudvar (according to P. Medović): 1–2; Hrtkovci, Gomolava (according to N. Tasić): 3; Mošorin, Stubarlija (according to P. Medović): 4 / grave 3; 5 / grave 33; 6 / grave 11; 7 / grave 7; 8 / grave 24; Jakovo (according to B. Petrović): 9; Surčin (according to J. Brunschmid): 10–12.

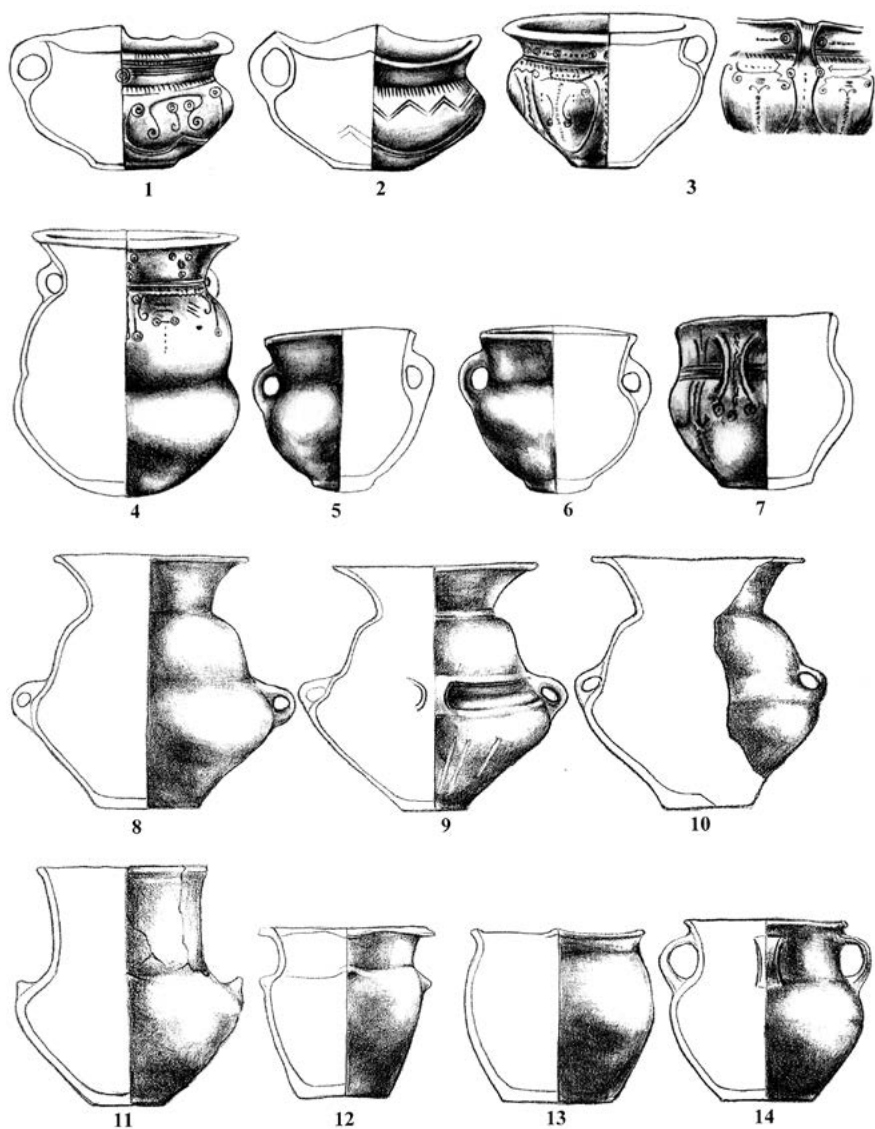


Plate 4. Ludoš (according to F. Mileker): 1–2; Orešac (according to D. Krstić): 3–7; At/ grave – 2: 8–14.

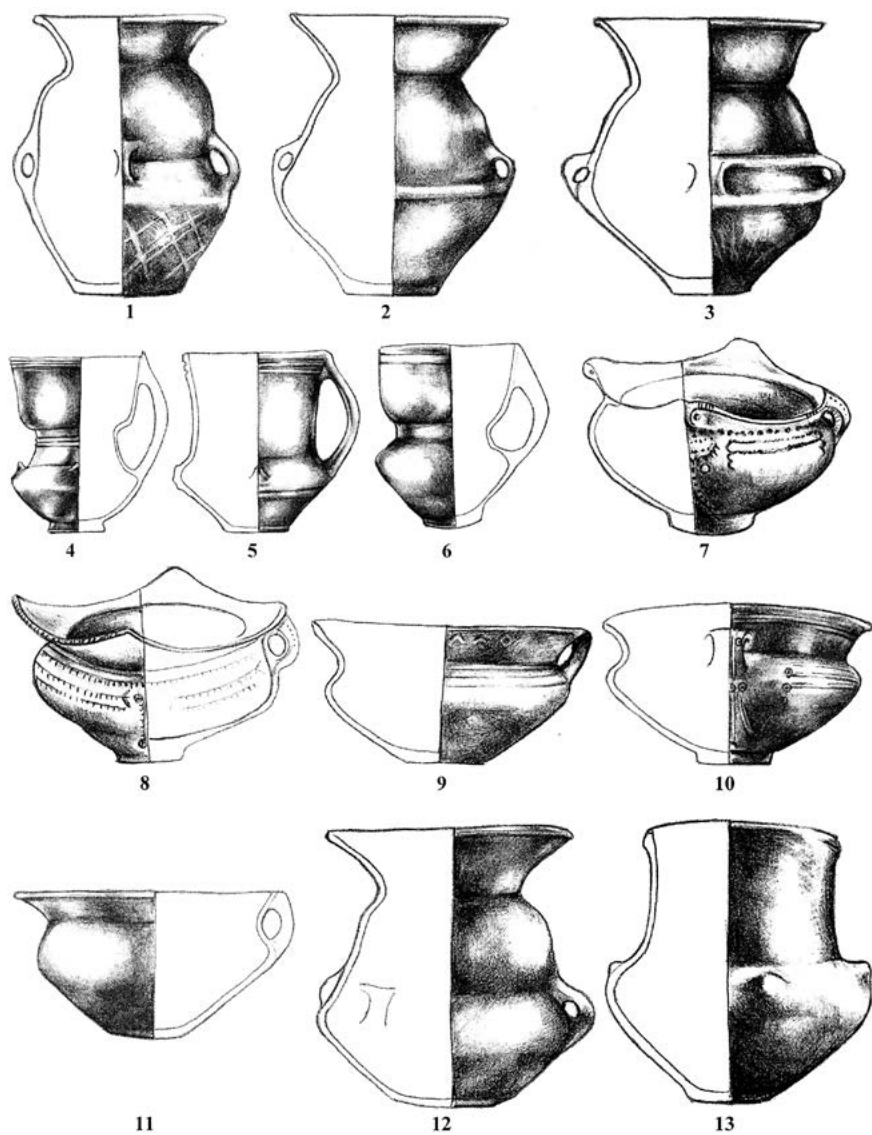


Plate 6. At / grave-1: 1–11; At / grave-3: 12–13.

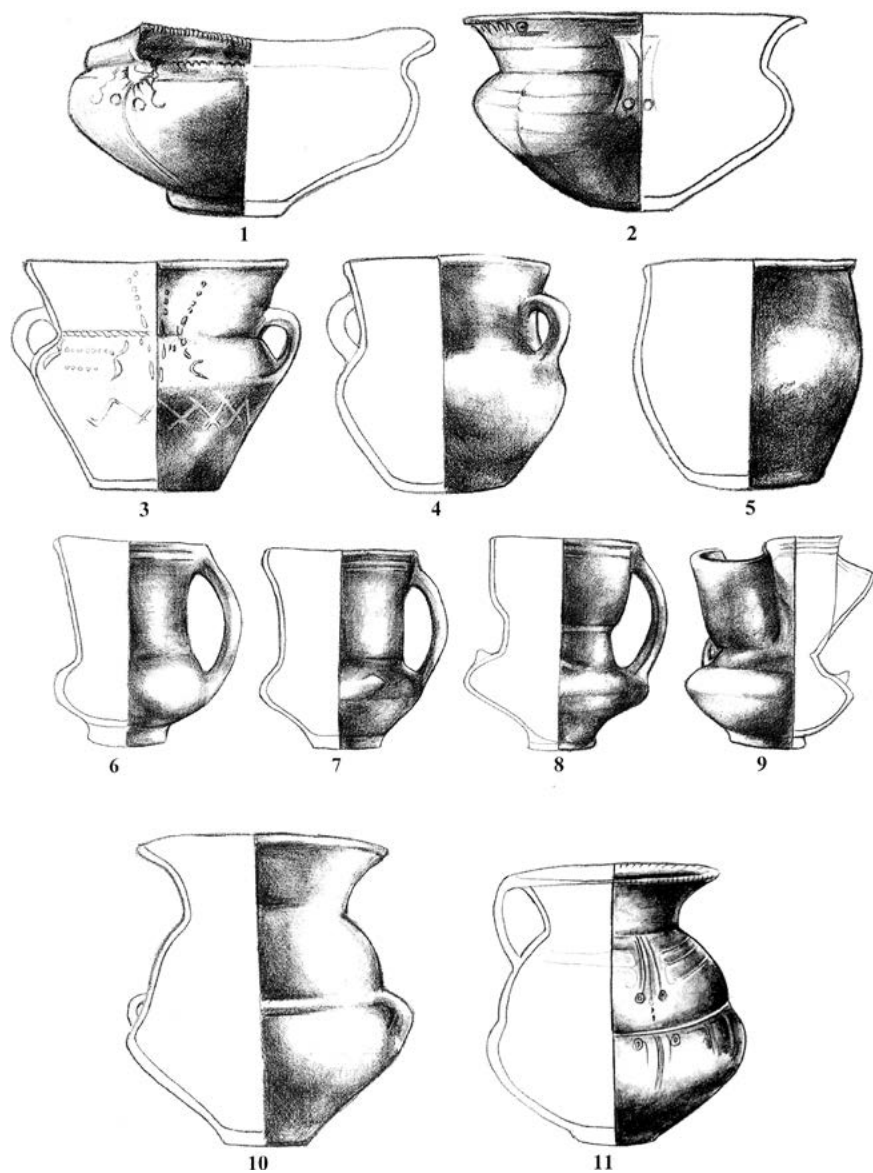


Plate 7. At / grave-3: 1-7; At / grave-4: 8-10; At (according to R. Rašajski): 11.

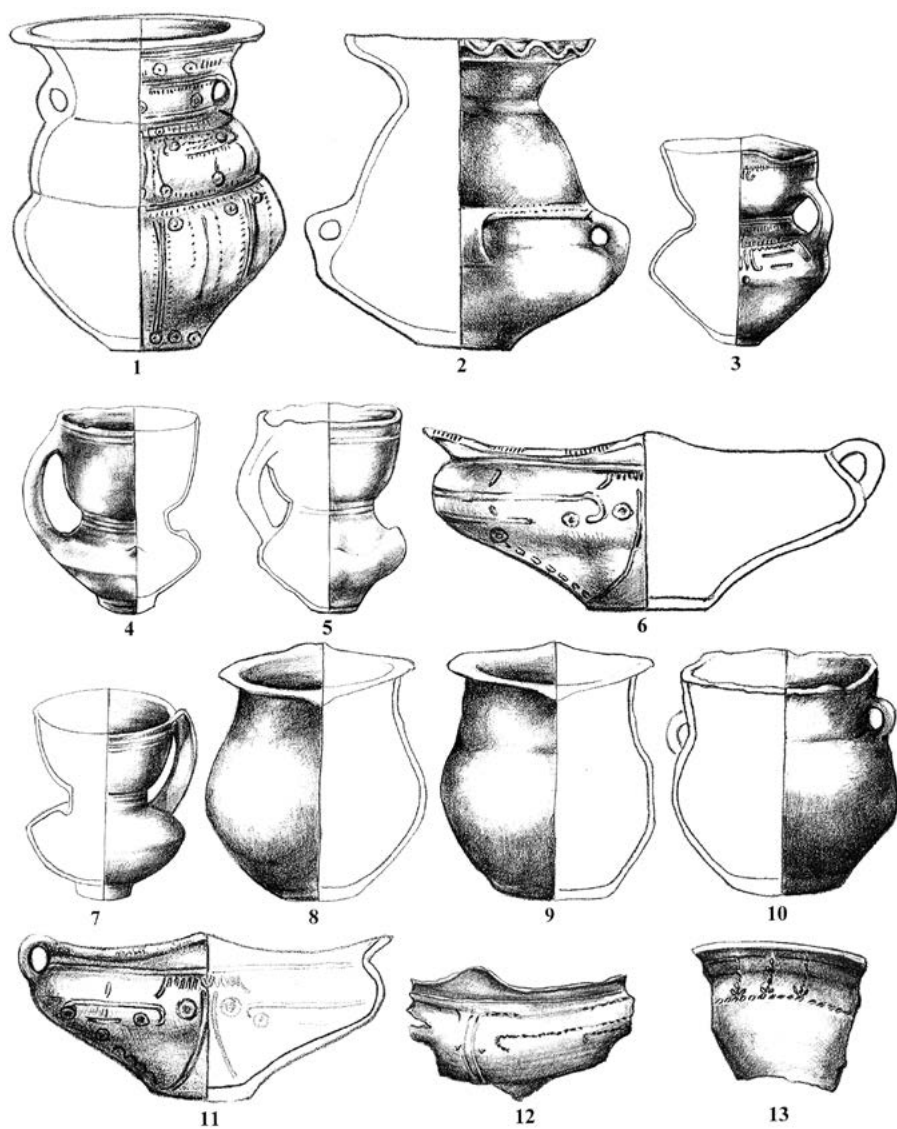


Plate 8. Kovin (according to T. Kovács and F. Mileker): 1–6; Omoljica: 7–13.

Pots-urns

These vessels are smaller in size and, with mostly minor deviations, have a biconical shape. They are mostly made of less purified clay with a lot of coarse sand, they have rough outer surfaces, and are rarely ornamented. They are well baked, and their colours vary from light brown to dark grey. They can be divided into two basic variants: biconical – with two or four handles, and slightly biconical – without handles (Table 2).

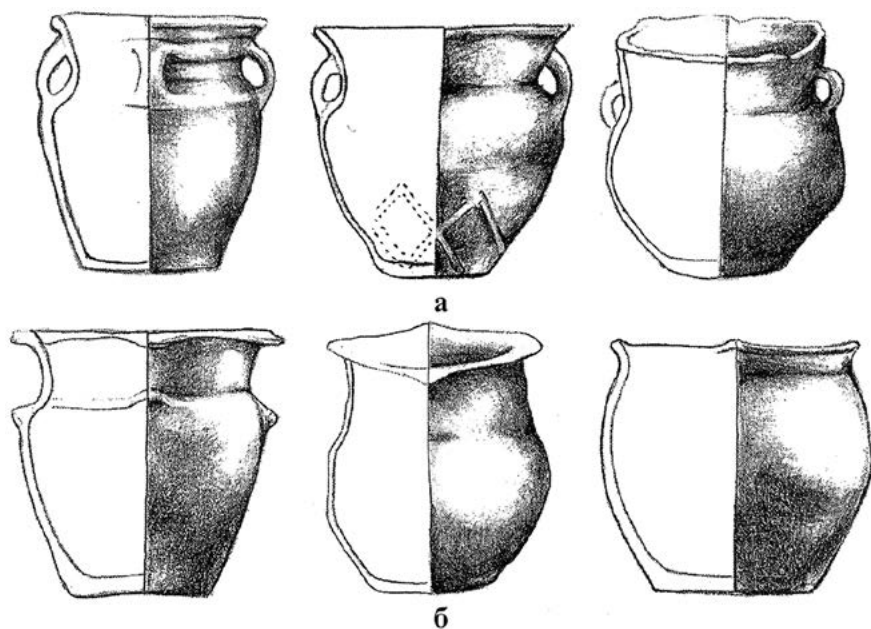


Table 2. Types of SzereMLE pots-urns in Serbia.

The first group includes vessels discovered at Popov Salaš, Stubarlija (Pl. 12/4–6), Omoljica (Pl. 8/10),⁴ Dubovac (Pl. 3/4–5), At (Pl. 5/13–15, Pl. 7/3–4),⁵ and Orešac (Pl. 4/5–7). These are smaller vessels with a taller, funnel-shaped neck, and a rounded or flattened rim. The shoulder is accentuated, and the belly is slightly rounded or conical. The bottoms of these vessels are narrow and flat. The middle part of the neck and the shoulder are joined by two or four smaller strap handles, some of which

⁴ Рашајски 1985, 166–173.

⁵ Majnarić-Pandžić 1985, 41–55.

are in the shape of the letter X. If they are decorated, the ornament is modest and is reduced to an incised mesh decoration placed on the lower part of the vessel's belly. In addition to this, the decoration can also be made by incising short vertical lines or smaller circular stitches (Table 2 a).

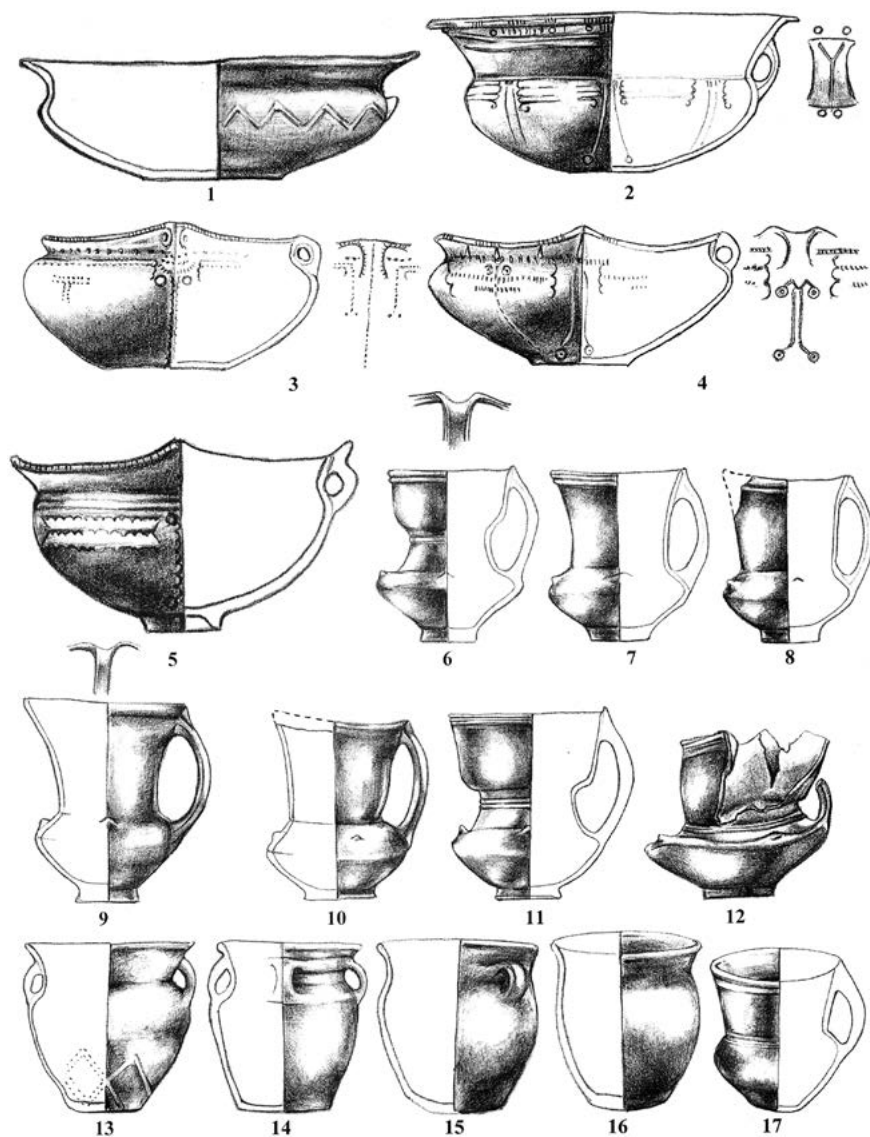


Plate 5. At / grave-2: 1-12; At / grave-1: 13-17 (according to N. Majnarić-Pandžić).

The second group consists of smaller vessels with a slightly biconical profile, where the rim is spread out horizontally. They are mostly without handles or have smaller tongue-shaped handles on the shoulders (Table 2 b). They were found in At and Omoljica (Pl. 4/12–13, Pl. 5/16, Pl. 7/5, Pl. 8/8–9).

The simplest decoration is made with deeply incised lines or grooving, a combination of bundles of vertical or oblique lines, that is, grooves that sometimes form a lattice or rhomboid motif, which is always located on the lower part of the belly. This motif is also present on the pots of this group, which are mostly undecorated.

Beakers

Beakers are a very characteristic form of vessel, as they have a recognisable shape and ornamentation. They are most often used as a “side dish” in graves, but they can also be used for profane purposes. Depending on the purpose, all the beakers discovered so far at sites in Serbia can be divided into two basic variants: smaller beakers that were found in settlements, and Mađarovce beakers that were exclusively found in graves.

The first variant of the beakers (Table 3 a) is made of more purified clay, has thinner walls, and may have a smooth or polished outer surface. They are well baked, and their colours vary from grey and dark grey to black. This basic beaker shape is quite variable so that several variants can be distinguished. On sites in Serbia, the most common type is a beaker with a tall, funnel-shaped neck that is profiled at the transition to the belly, so that the vessel has a tiered form. The belly is biconical, often with a very low cone. The bottom is narrow and can be flat or slightly concave. The handle can connect the edge of the rim to the upper part of the belly, and it can be under the rim on the neck, also connected to the upper part of the belly. The second type of beaker (Table 3 b) has a flattened rim, a shorter funnel-shaped neck, which is connected to an accentuated shoulder by a smaller bent handle. The belly can be conical or slightly rounded, and the bottom flat or slightly indented.

These tiered beakers have very distinctive ornamentation. It mainly consists of four regularly distributed, larger concentric circles on the neck and upper part of the belly, the so-called eyes, filled with encrustation.

Beakers of this variant were discovered at sites around Subotica (Pl. 1/3), Popov Salaš (Pl. 1/9–10), Feudvar (Pl. 2/1–2), and Gomolava (Pl. 2/3).

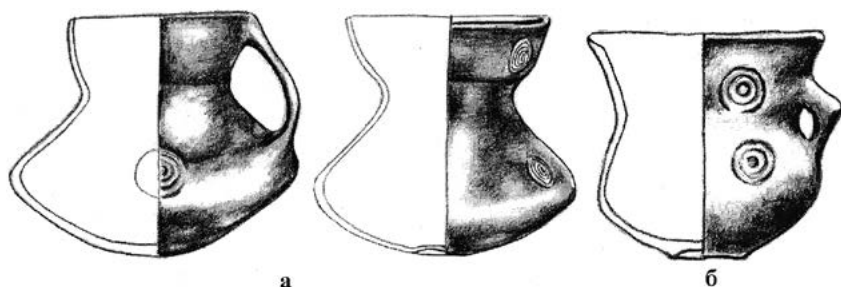


Table 3. Types of Szeremle beakers in Serbia.

In most of the graves in the necropolis where Szeremle pottery was found, Mad'arovce beakers were discovered. As with the previous variety of beakers, their basic shape is also quite variable (Table 4).

The first group consists of beakers with a flattened rim, a longer funnel-shaped neck that can be more or less tightened to form a floor, that is, a pronounced transition to a biconical belly that has a very low cone (Table 4 a). The bottom of these vessels is accentuated, square, and slightly concave. A longer banded handle is semicircularly cut into the edge of the vessel and connects it to the upper or widest part of the belly. An exception in this group is the beaker from Kovin, where the handle joins the middle part of the neck and the upper part of the belly.

The second group consists of beakers, the rim of which is slightly longer, and the longer, funnel-shaped neck rests directly, without forming an accentuated floor, on the upper part of the belly, which also has a low cone. The handles are identically placed as in the previous group, and the shape of the bottom is also identical, except for the beaker from Surčin, which has four feet instead of one foot (Table 4 b).

With the exception of a few, the ornamentation on the Mad'arovce-type beakers is fairly uniform. The decoration is made by grooving under the rim and on the neck, with a double or triple line that goes around the recipient. On the upper part of the belly there are regularly distributed horn-shaped protrusions. An exception to this method of creating points is represented by the beaker from Kovin, which has a grooved line under the rim, bordered with a series of short vertical incisions that are interrupted on the lower side of the line by three longer vertical grooves framed by two arched lines. On the upper part of the belly, this ornament is repeated, but two longer horizontal grooves and an embossed circle below the vertical line are added (Pl. 8/3).

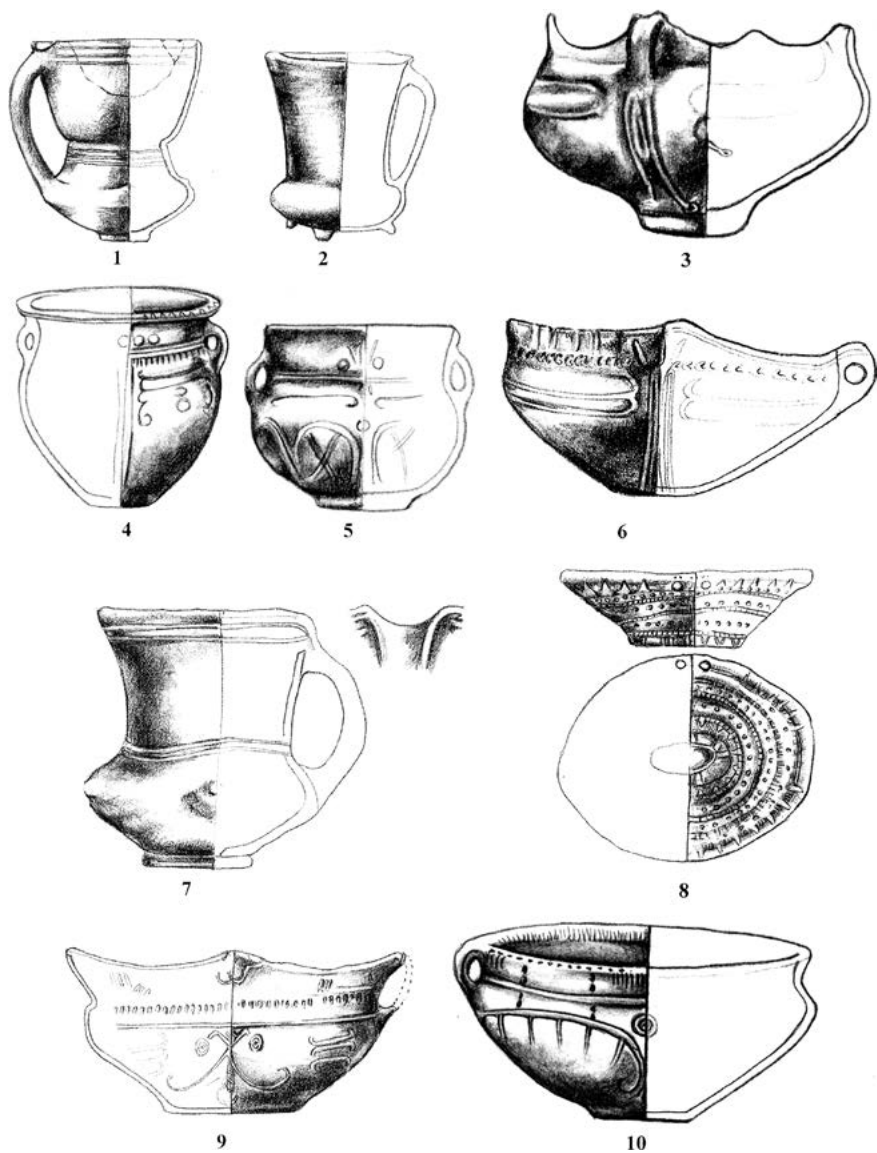


Plate 3. Surčin (according to J. Brunschmid): 1–3; Dubovac – Vršac City Museum: 4–5; Krstur Bajir: 6; Ludoš – Vršac City Museum: 7–10.

Beakers of this type were discovered at the sites of Surčin (Pl. 3/1–2), Omoljica (Pl. 8/7), Kovin (Pl. 8/3–5), Ludoš (Pl. 3/7), and At (Pl. 5/6–11, T. 6/4–6, T. 7/6–9).

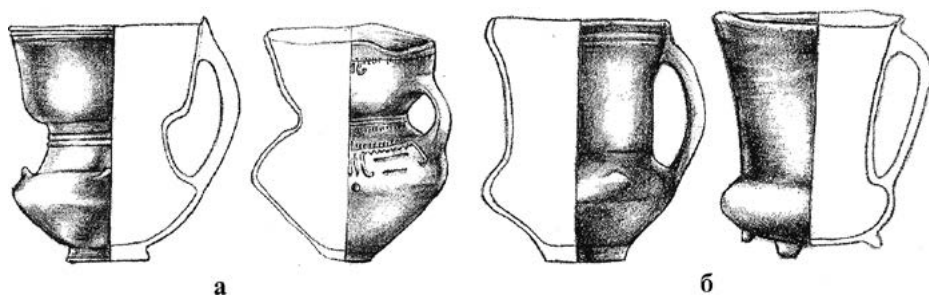


Table 4. Types of Mad'arovce beakers in Serbia.

Bowls

The largest number of bowls in Serbia was discovered in graves in necropoleis with cremation burials. These are shallower or deeper biconical vessels, mostly made of well purified clay, polished or partially polished outer surfaces, decorated with incised and less often grooved ornaments with white encrustation (Table 5). The colour of these vessels varies from dark brown, dark grey, to grey, and grey-black. They are the most common accessory in graves, used mainly as amphora-urn lids. These bowls can be divided into two basic shapes: biconical bowls with a profiled rim, and bowls with an S-profile.

The first group includes the largest number of bowls (Table 5a). They have a clearly defined and profiled rim that is more or less horizontally spread out and is triangular or tongue-shaped, in four regularly distributed places. The neck is shorter and funnel-shaped, the shoulder is slightly accentuated, the belly is slightly rounded and sometimes conical. The bottom of these vessels is narrower, and can be flat or slightly accentuated and concave. It usually has a smaller X-shaped ribbon handle that comes out of the rim and connects it to the shoulder, that is, the upper part of the belly.

The ornament on these vessels is quite simple, and the upper part of the vessel is generally separated from the lower part by horizontal incised bands, below which continue a series of combined vertical and arched lines with embossed circles. Since they were used as lids for urns, the bottom of these bowls is also decorated, and the ornament is richly encrusted with white.

This form of bowl was found at the sites of Kaluđerske Livade (Pl. 2/9),⁶ Surčin (Pl. 3/1), Krstur-Bajir (Pl. 3/6), Omoljica (Pl. 8/11–13), Kovin (Pl. 8/6), Ludoš (Pl. 3/8–9), and At (Pl. 5/3–5, Pl. 6/7–8, Pl. 7/1).

S-profile bowls were discovered at the sites in the vicinity of Odžak (Pl. 1/4–6), Popov Salaš (Pl. 1/7–8), Stubarlija (Pl. 2/7–8), Surčin (Pl. 3/3), Kovin (Pl. 8/6), Orešac (Pl. 4/3), Ludoš (Pl. 3/9–10, Pl. 4/1–2),⁷ and At (Pl. 5/1–2, Pl. 6/9–11, Pl. 7/1–2).

These bowls have a horizontally expanded rim that is joined to the shoulder by X-handles (Table 5 b). The neck is shorter, wider and funnel-shaped, and the shoulder is slightly rounded. The vessel is widest in the upper part of the belly, which narrows conically towards the bottom. The bottom is quite narrow and flat, and can be slightly accentuated. As with the previous form, the ornament is divided into two segments in these bowls, namely on the upper part the ornament is conceived horizontally, and on the lower one vertically.

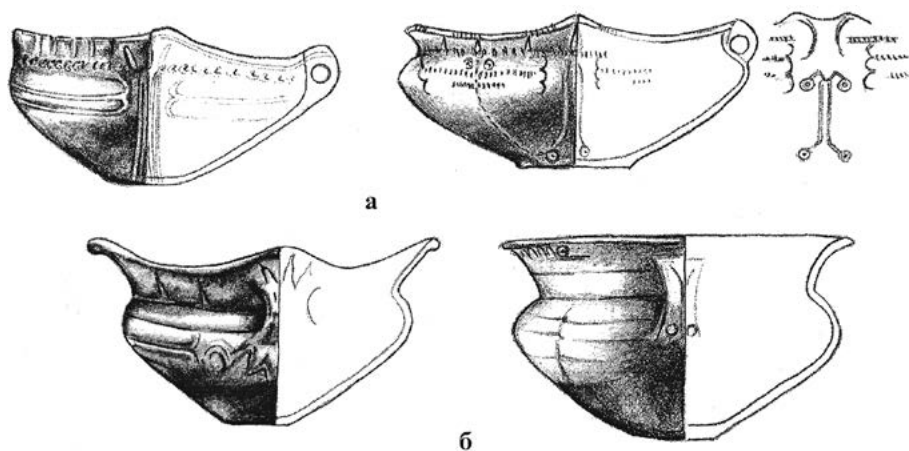


Table 5. Types of Szeremle bowls in Serbia.

⁶ Петровић 2006, 19, T. VI/2.

⁷ Milleker 1891, 95.

Analogies of Szeremle ceramic forms

The end of the Early and the beginning of the Middle Bronze Age on the territory of Serbia, that is, in the south-western and southern parts of Bačka, in certain localities in Srem, and southern and south-eastern Banat, will be marked by the appearance of Szeremle encrusted pottery. Created under the influence of the Southern and Northern Pannonian groups, it will retain many of the ceramic forms of these groups, but will also provide some specific forms and ways of ornamenting the vessels.

Among the Danube valley groups with encrusted pottery, the amphora is a very common form of vessel. As we have mentioned, the shape of the amphorae discovered on the territory of Serbia is quite unified. From the very shape of the amphora of the Northern group with encrusted pottery, the characteristic Szeremle shape of this vessel arose, taking on a tiered form that will be characteristic to a considerable extent, and in a somewhat less modified form for the Dubovac–Žuto brdo group, as well as in the necropoleis in Oltenia–Cîrna, Balta Verde and others. Also, in the decoration of these vessels in the Dubovac–Žuto brdo group, the influence of Szeremle can be seen, namely, the difference in the decoration of the upper and lower part of the vessel is evident. While the upper part is decorated in an almost woodcut technique, and on which a thicker encrustation is applied, the lower part of the vessel is ornamented with incised lines, a net ornament, and bands with a thinner application of encrustation.

This form of amphora-urn, belonging to the Northern Danube group with encrusted pottery, can be found in greater numbers at the Patince necropolis in Slovakia;⁸ also, very similar vessels were discovered at the Királyszentistván necropolis.⁹ The specimens of these vessels discovered at At, Surčin, in the vicinity of Subotica, and Sombor, are identical to vessels from the sites of Kelebia, Regöly, Szeremle, Tolna, and Szob–Kőzúzó.¹⁰ The urns discovered in At, Kóvin, and Omoljica have analogies from the sites of Szőny–Nagymagtár, Dunaalmás, Királyszentist-

⁸ Dušek 1969, T. 30/2, T. 35/6, T. 37/2.

⁹ Bóna 1975, T. 215/1, T. 216/3 - Grab 2, T. 219/1 - Grab 10.

¹⁰ Bándi & Kovács 1974, T. 3/9, T. 6/4, T. 8/2, T. 9/1-2, 5-6, T. 9/11; Kovács 1986, Abb. 3/5.

ván, Szeremle, and Kölesd.¹¹ An amphora with a wavy rim, similar to one discovered in Kovin, was found in the Dunaalmás necropolis.¹²

Amphorae from Surčin have four banded handles that are semicircularly cut into the rim of the vessel, and analogies for them can be found at the Kárad–Gerézd and Taszár sites.¹³

Analogies of amphorae from the territory of Serbia can also be found at localities in Croatia, namely Baranja and eastern Slavonia. Identical specimens come from the sites of Zmajevac, Darda, Osijek, Aljmaš, Dalj, Bijelo Brdo, and others.¹⁴

A significant number of bowls has been discovered at sites in Serbia. They mostly come from necropoleis where they were used as covers. On the bowls, perhaps, the influence of both the Northern and the Southern Danube groups with encrusted pottery can be seen more clearly. The forms of these vessels from the territory of Serbia are equally represented in both of these groups. We find analogies for them in numerous localities in Hungary: Szeremle, Kölesd, Dunaújváros, Kelebia,¹⁵ Királyszentistván, Medina, Regöly, and others.¹⁶ This form of bowl was also found in the necropolis of Patince in Slovakia.¹⁷ Also, in Croatia, namely, in the locality of Kozarac.¹⁸

The smaller tiered beakers represent one of the most recognisable ceramic forms of the Szeremle group, both in terms of shape and ornamentation – larger concentric circles filled with encrustation, sometimes supplemented with oblique incisions or circular depressions. In Serbia, this type of beaker was found in the settlements of Popov Salaš, Feudvar, Gomolava, one specimen comes from the vicinity of Subotica but without the context of the find, while all the others were found in layers of the Vatin culture. A large number of these beakers was discovered on the territory of Hungary and in a slightly smaller number in Croatia. Analogies to our beaker in Hungary are found in the localities of Dunaszekcső,

¹¹ Bóna 1975, T. 208/2, 15; T. 208/2, 16; T. 224/4; Bándi & Kovács 1974, T. 5/12.

¹² Bóna 1975, T. 208/1.

¹³ Bándi 1984, T. 9/12; Bóna 1975, T. 263/3.

¹⁴ Bándi & Kovács 1974, T. 11/1; Šimić 2000, T. 6.2/4, T. 6.2/3, T. 6.3/1–2, T. 6.2/1–2; D. Garašanin 1983, T. LXII/1–2.

¹⁵ Wosinsky 1904, T. 69; Bándi 1971, T. I/1; Bándi & Kovács 1974, T. 4/4, T. 5/7, T. 6/4, T. 6/4, T. 7/1, T. 8/9; Bóna 1975, T. 242/19, T. 245/23, T. 67/1.

¹⁶ Bóna 1975, T. 219/8, T. 231/24; Bándi & Kovács 1974, T. 6/2, 11.

¹⁷ Dušek 1969, T. 15/1.

¹⁸ Bándi & Zoffman 1967, T. 7/6; Spajić 1956, T. 2/1–2.

Gerjen, Hajós–Hild-pusztá, Kelebia, Medina, Szeremle, and Tolna county.¹⁹ In sites in Croatia, these beakers were found in Batina, Dalj, Kozarac, Darda, and Sotin.²⁰

The second group consists of beakers that were found exclusively in graves. They were found on necropoleis in Surčin, Omoljica, Kovin, At, and Ludoš. This form of beaker is known from sites in Hungary, namely, from the sites at Szőny–Nagymagtár, Dunaalmás, Királyszentistván, Kelebia, and others.²¹ Apart from these beakers, a large number of Mad'arovce type beakers were found in graves in necropoleis in Serbia. This perfectly illustrates the influences, mixing, and taking over of certain vessel forms among cultures with encrusted pottery.²² Analogies to these beakers can be found in grave 29 at the Mosonszentmiklós–Jánosháza-pusztá necropolis, which is identical to the specimen from Surčin.²³ A beaker of this type from Kovin, which is decorated with characteristic Szeremle ornamentation, is particularly interesting (Table 4a, Pl. 8/3).²⁴ Apart from this beaker, we also see these influences on the beaker found at the Kölesd site.²⁵

A smaller number of pots was discovered at sites in Serbia. This vessel shape is not overrepresented in the Southern nor in the Northern Danube groups. Pots from our territory, generally, instead of tongue-shaped handles feature ribbon handles located at the transition from the neck to the shoulder. Analogies to these pots can be found at the sites of Szeremle, Szőny–Nagymagtár, Dunaalmás, Királyszentistván, Bóly, Szebény, Kelebia, and Regöly,²⁶ and from Croatia this type of pot is known from the site of Kozarac–Cigłana.²⁷

¹⁹ Bándi & Kovács 1970, Tbb. 5–6; Bándi & Kovács 1974, T. 1/1–9, T. 2/2, 12, T. 3/1, 8, T. 4/1, T. 5/1, 3–4, 9, T. 6/1, 5, 7–8, T. 9/7–10; Bóna 1975, T. 72/4, 11–13, 19, 21, 24–26, T. 73/7, T. 257/2; Bándi 1984, Tbb. 11/19–21.

²⁰ Bándi & Kovács 1974, T. 11/2–3; Šimić 2000, T. 5.1/1–2, T. 5.2/1–3, T. 5.4/1–3.

²¹ Bóna 1975, T. 207/3, 5, 8, T. 208/3–4, 6, 11, T. 216/6, 14, T. 2018/10, 12, T. 219/19, T. 228/4; Bándi & Kovács 1974, T. 2/3, 10, T. 3/11.

²² Novotná & Novotný 1984, 323–340.

²³ Brunšmid 1904, 203.

²⁴ Kovács 1988, Tbb. 4/5.

²⁵ Bándi & Kovács 1974, T. 5/10.

²⁶ Wosinsky 1904, T. 68/2, 4; Bándi & Kovács 1974, T. 8/4, 10, T. 2/8, T. 6/13; Bóna 1975, T. 256/5, 8, T. 204/1, T. 206/17, T. 208/7, T. 217/2, T. 219/25, T. 246/6, 9, T. 248/10, T. 251/20, T. 59/9.

²⁷ Šimić 2000, T. 5.1/3–4.

Ornaments of the Szeremle group

As we have mentioned, ornamental motifs are made by carving, embossing, and grooving, while the ornament made by ravishing is missing (Table 6).

Amphorae can be undecorated, decorated with a simple ornament, or more richly ornamented. Around the belly, at the height of the handles, amphorae can have a weakly accentuated plastic rib, and some also have hornlike appendages. The simplest decoration is made with deeply incised lines or grooving, a combination of bundles of vertical or oblique lines, that is, grooves that sometimes form a lattice or a rhomboid motif and are always located on the lower part of the belly. An identical motif can be found on pots of this group, which are for the most part undecorated. The motifs found on the lower part of the belly of the amphorae, both in simpler and more richly ornamented ones, never reach the bottom of the vessel. In the case of decorated amphorae, the rim is ornamented with groups of short transverse incisions, and for the first time the decoration of the inner opening of the vessel also appears. This is most likely due to the almost horizontally unfolded rim, which exposes this part of the vessel to view. These are mostly simple motifs, like short horizontal incisions or narrow triangles arranged in groups. In the upper part of the vessel horizontal and vertical zones are combined. Concentric circles in combination with several vertical incisions are most often stamped on the neck. Above and below this ornament are horizontal bands filled with vertical incisions. The central motif is, as a rule, made by a combination of three elements: horizontal lines, made of short transverse incisions, which end in circles on the upper or lower side. At the top there is usually a spiral ornament made with short horizontal incisions. This ornament can also be placed on the side of the horizontal border. On the amphorae there are two different motifs of such borders that are repeated several times around the recipient. In the space between them, the ornament is made horizontally from a series of smaller cuts, a toothed motif made from a series of shorter cuts, dotted stitches or small circles. Around the rim of the handle the ornament is made of rows of shorter notches at the ends of which there are circles, and in the middle of the handle there are usually regularly arranged circles. In relation to the upper part of the belly, which is ornamented mostly with several simplified

vertical rows of borders, the ornament of the lower part of the belly is a combination of horizontal and vertical bundles of incised lines.²⁸

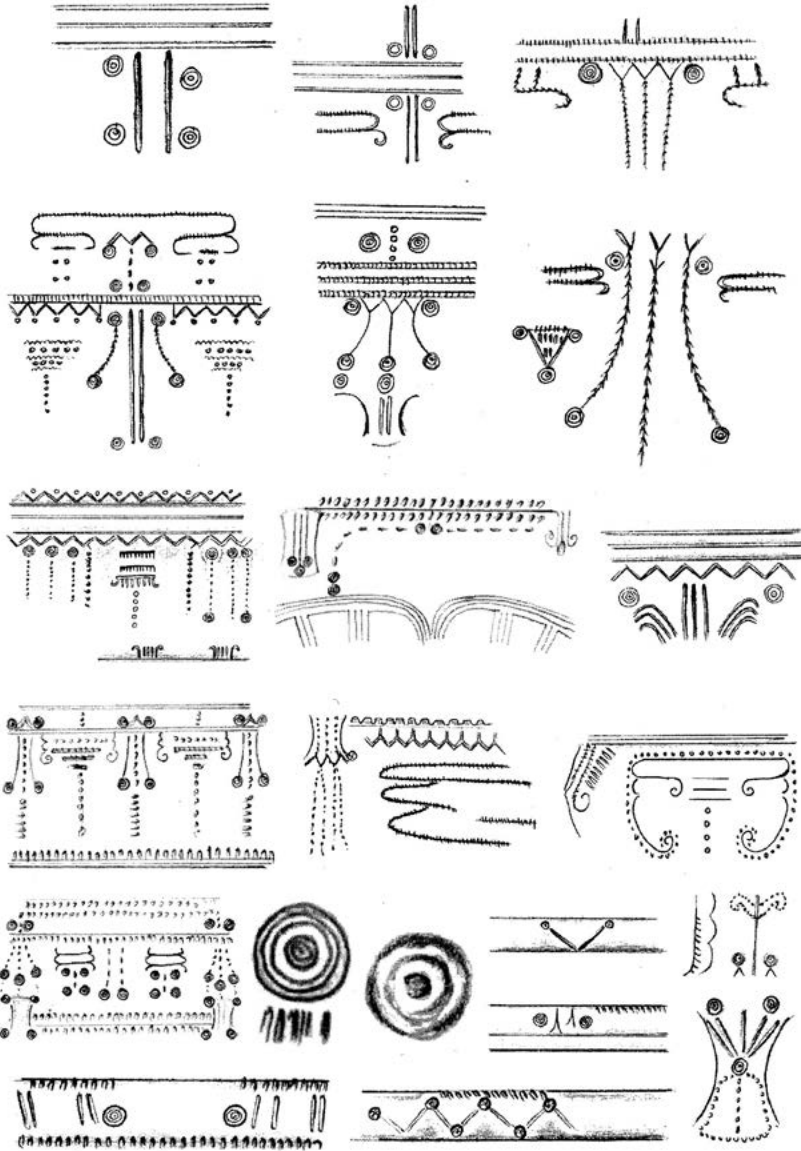


Table 6. Examples of ornamental motifs on Szeremle pottery.

²⁸ Пековић 2013, 132–134.

The ornament on the bowls is similar but somewhat simpler. With them, too, the inner opening is decorated with a band filled with rows of short vertical incisions, the rim itself with similar incisions, embossed circles, dotted stitches, and a V-shaped motif, and the outer edge of the rim with groups of short incisions. The neck is decorated with parallel incised horizontal lines, between which circles are embossed. The neck is always separated from the shoulders by a horizontally incised strip, which can also be filled with short notches. The ornament in the upper part of the bowl is conceptually similar to that of the amphora, that is, it combines horizontal and vertical zones. Similar borders – incised lines in combination with embossed circles and spiral ornament – are made, and between them are rows of shorter incisions, dotted stitches, or smaller circles. Sometimes the greater part of the bowl is covered only with horizontal bands of various incised lines, shorter incisions, or dotted stitches. The bottoms of the bowls are often decorated because they were used as lids for urns. The decoration is simple and consists of a series of circular impressions, shorter incisions, but smaller concentric circles can also be found. If they are decorated, the handles on the bowls have a simple ornament like those on the amphorae.

Because of their distinctive shape and ornamentation, beakers are the most characteristic form of vessel of this group. The basic ornamental motif are larger concentric circles filled with white lime mass. There are usually four of them and they are distributed on the neck and upper belly. Since these vessels are mostly dark in colour, this ornament is very effective. Sometimes this decoration is complemented by grouped rows of shorter vertical incisions, V-shaped bands filled with incisions, and dotted stitches.

Analysis of ornamental motifs

The Szeremle group was formed by merging the forms of Southern and Northern Danube pottery. In the decorative repertoire of this group, with its vertical organisation, motifs from the Northern Danube prevail (Table 7), while, as we have stated, those from the Southern Danube group are retained to a much lesser extent.²⁹

²⁹ Пековић 2023, 12–14, табела 4.

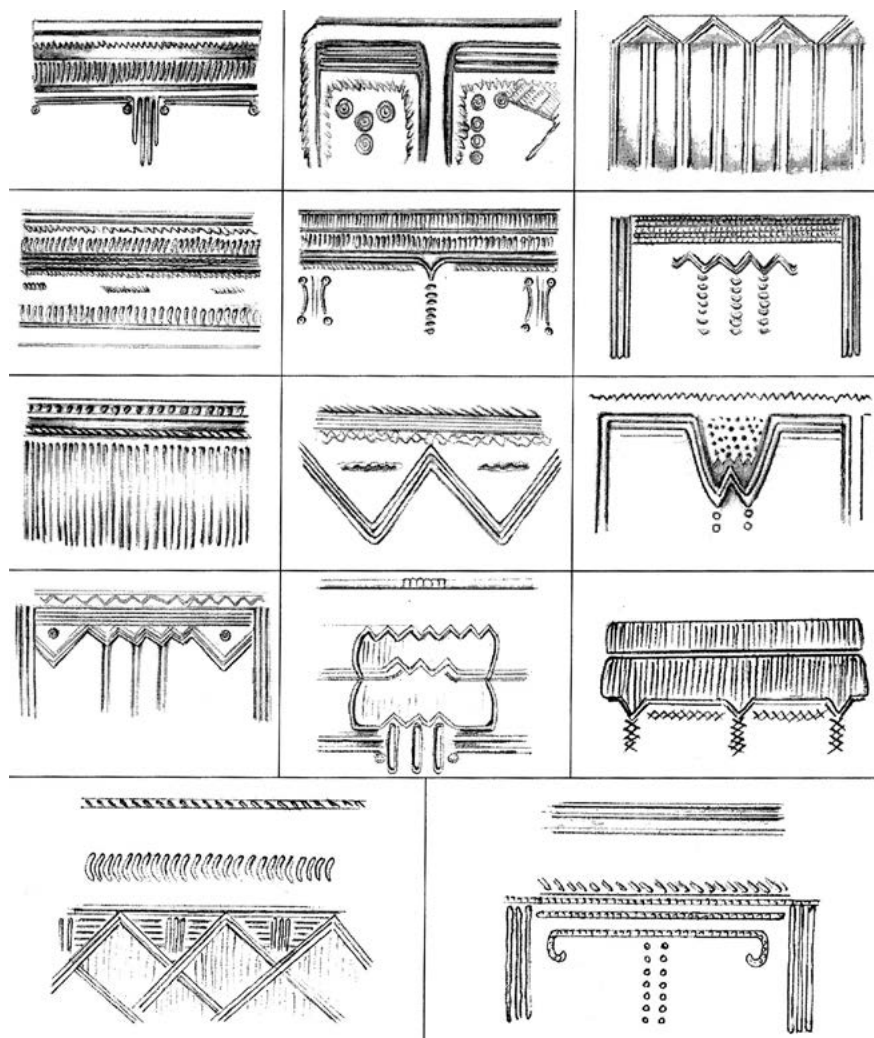


Table 7. Examples of ornamental motifs on South Danube pottery.

In many northern Danubian localities, we find ceramics ornamented with motifs which, to a greater or lesser extent, are complemented by the ornamentation of the Szeremle group, and later also of the Dubovac–Žuto brdo group.³⁰ These are, as the central ornament, vertical mo-

³⁰ In southern Slovakia, ceramics decorated in this way can be found in the localities of Štrúrovo, Šalov, Iža, Kamenica nad Hronom, and Patnice. Dušek 1969, T. 17/3, 7, T. 18/1, T.

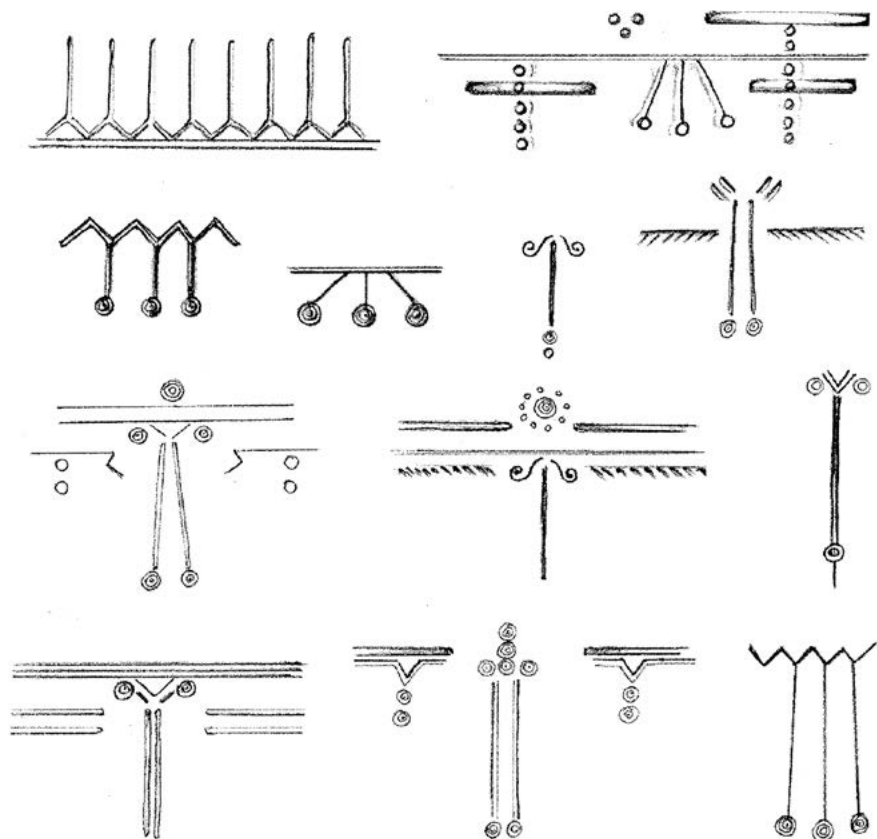


Table 8. Examples of ornamental motifs on North Danube pottery.

tifs, that is, from one to three shorter or longer lines, at the ends of which there are smaller circles. These circles may also be located above these lines bordered by multiple V-motifs or parallel incised horizontal lines. On both sides of that central motif there is mostly a horizontal serrated line, a spiral or elongated oval field, which is a frequent motif in Szeremle, and especially in the Dubovac-Žuto brdo group, where it was later complemented by concentric circles. Also, as a motif taken from North-

19/4, T. 25/10, T. 37/2, T. 40/7, T. 51/10, T. 55/2, 6, T. 57/10. In Hungary, also in numerous locations: Szöny-Koponyás, Szöny-Nagymagtár, Királyszentistván, Tiszaug-Kéménýtető, Siófok-Balatonszéplak, and others. Bóna 1975, T. 205/10, T. 207, T. 215/1, 4-5, 13, 18-19, T. 216/3, T. 218/5-7; Bándi 1984, T. 75/4, 6.

ern Danube ornamentation, there are parallel horizontal and vertical bands with a series of smaller circles, as well as a tendril motif in the shape of a hanging moustache, often in combination with a concentric circle bordered by dotted stitches, resembling a flower.³¹

One of the novelties in the ornamentation of Szeremle pottery, which was also taken over by the Dubovac–Žuto brdo group, is the decoration of the inner part of the vessel, just below the rim. In the cases of Northern and Southern Danube vessels, the interior is never decorated. The reason for this decoration should be found in the fact that the rim of the vessels, especially the amphorae and a large number of bowls, was spread out almost horizontally, which is why the inner part was exposed to view. In Szeremle vessels, at first this decoration is quite simple and consists of rows of short vertical incisions. Later, it expands to other motifs, such as stretched zigzag lines, which can be supplemented with circles on the tops. Also, a frequent decoration is the motif of the inverted letter V, at the junction of which the line continues to the rim itself. In the Dubovac–Žuto brdo group these motifs are extended to parallel horizontal lines that are sometimes filled with a series of vertical incisions, circles, triangles, garlands, and a number of other combinations.

The rim itself is similarly decorated. In the case of Szeremle vessels, these are series of short incisions, dotted incisions, zigzag incisions, and this ornamentation in the Dubovac–Žuto brdo group extends to the motifs of hatched triangles, flowing rhombuses, a combination of incisions with concentric circles, and more. In the Dubovac–Žuto brdo group, rims ornamented in this way are mostly found on amphorae, bowls to a much lesser extent, and the radially profiled extensions on the bases are also decorated with this ornamentation.

As already mentioned, one of the most characteristic ornamental motifs – which is identical and represented in the Szeremle, Dubovac–Žuto brdo to Gârla Mare–Cîrna groups – are embossed concentric circles, most often executed on the high neck of vessels arranged in a triangle, square or, most often, in the shape of a cross.

The similarity of the ornamentation of these two groups is especially noticeable on the so-called amphorae storey type, bowl-shaped, which

³¹ This motif, the so-called hanging moustache, can also be seen on figurines, and it is probably an imitation of a metal pendant which, like the comb pendant, is a common motif on pottery.

was taken over from the Szeremle group, together with the ornamental concept of the Dubovac–Žuto brdo group. On these vessels, the development of ornamental motifs can be clearly seen – from simple ones, such as those from the Szeremle amphora, to the more complex and extremely diverse ornaments. Basically, the layout of the ornamentation is the same. On the upper part of the vessel, it is reduced in one case to the repetition of the same vertically executed four motifs or, in another case, to two series of two different motifs. In the case of more simply decorated vessels, the space between these ornaments is mostly undecorated, and later this surface is also filled with ornaments.

The central ornament in both groups consists of a triple scheme. In the case of Szeremle vessels, these are three parallel, vertical incised lines that end with embossed circles and a flowing, mostly quadruple V-motif located above. Often this motif is supplemented with smaller tendrils, dotted stitches, and short cuts. In the case of the Dubovac–Žuto brdo group, this motif is significantly transformed and supplemented, for example, with a spiral ornament, concentric circles, and many other elements; but, despite these additions, the triple scheme remains unchanged (Table 9). We should certainly mention the motif of the garland, which is present on Szeremle vessels; it is single or double, but wider, with concentric circles connected. The motif of the garland in the Dubovac–Žuto brdo group is executed in various variants. Sometimes it can take the form of a border placed under the rim, and as a motif we find them on the belly of amphorae, very often in combination with concentric circles.

As a rule, the lower part of the belly of the vessel is much more modestly and simply ornamented than the upper part of the vessel. On the lower parts of the belly of vessels of the Dubovac–Žuto brdo group, the ornament is almost identical to the simple decoration like those on Szeremle vessels. These are belts of horizontally and vertically incised bundles of lines, sometimes semicircular or circular in shape, in which the motif of the letter X or a cross can be incised. Also, this ornament in the Dubovac–Žuto brdo group can be much more complex and made of a series of vertical incisions, dotted stitches, or circles, and sometimes a similar or partially repeated ornament is transferred from the upper to the lower part of the vessel.

Apart from the amphorae, the similarity of the ornaments can also be seen on the bowls, which basically have a similar scheme, although

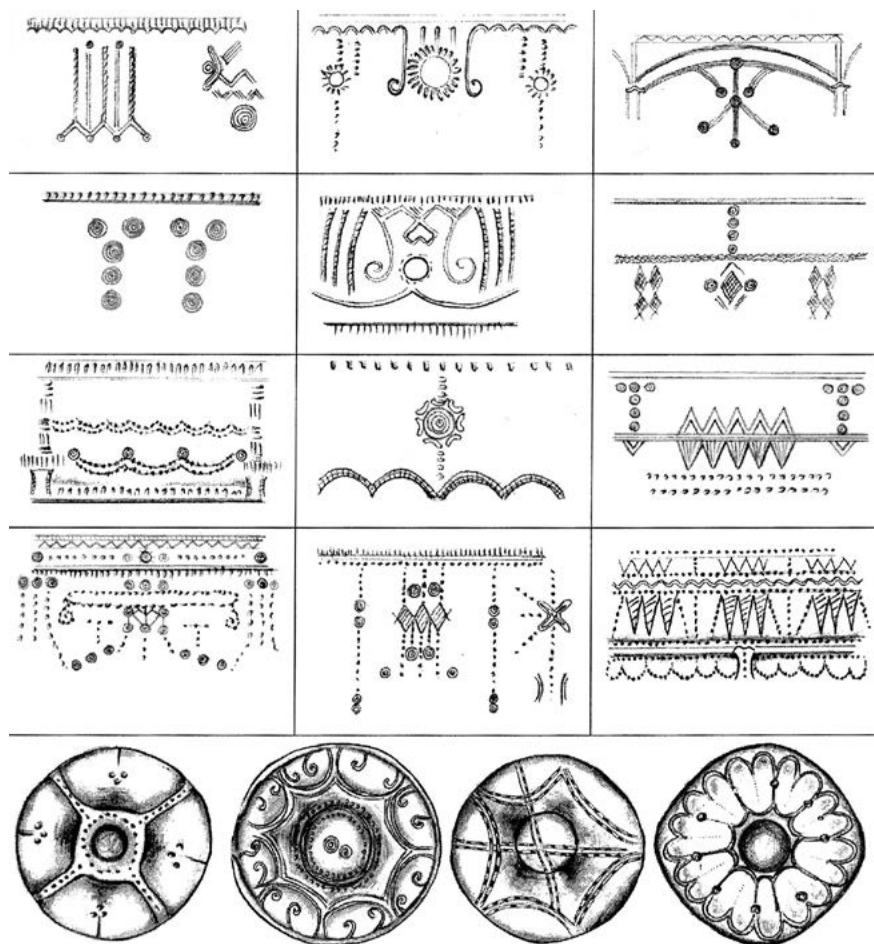


Table 9. Examples of ornamental motifs on Dubovac-Žuto brdo pottery.

new ornamental motifs appear in the Dubovac-Žuto brdo group, significantly changed but still recognisable. This similarity is also evident in the shapes of the bowls, especially those in which the rim is angularly modelled, and from which the handle connecting it to the shoulder starts.

Also, the ornaments made in relief on Szeremle and Dubovac-Žuto brdo pottery have similarities. On some amphorae of the Szeremle group, there is also a weakly accentuated plastic rib around the belly, at the height of the handles, and some also have hornlike appendages. This relief ornament in the Dubovac-Žuto brdo group is more in the func-

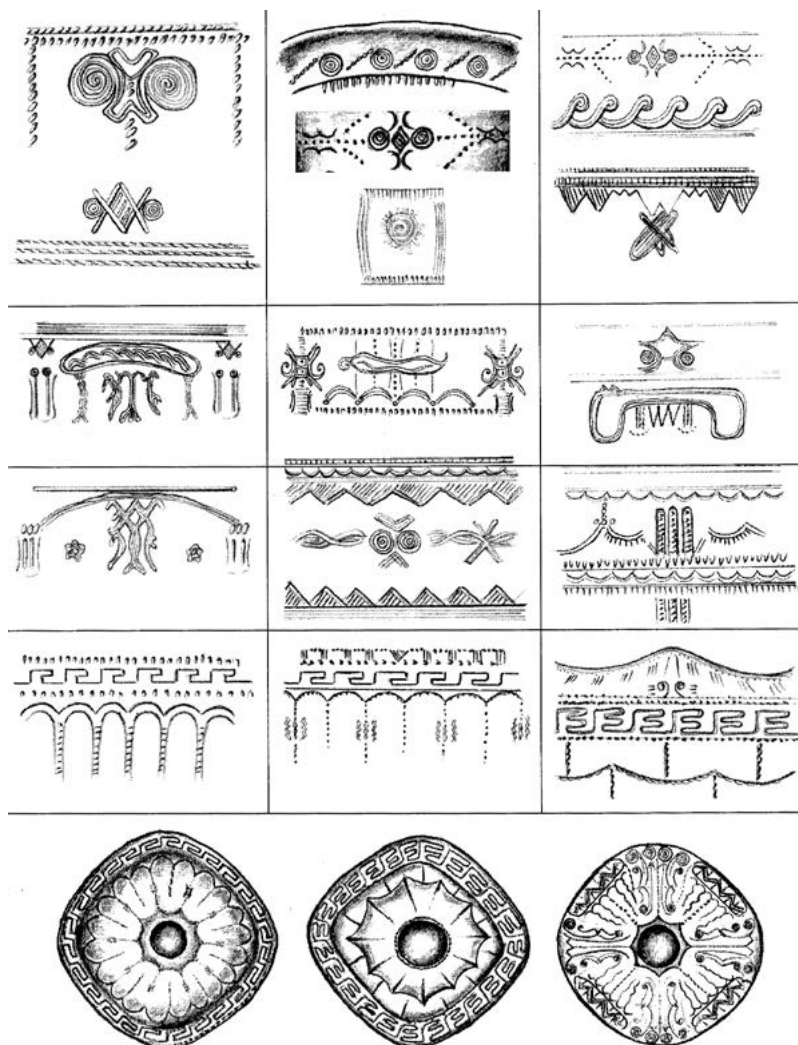


Table 9a. Examples of ornamental motifs on Dubovac-Žuto brdo pottery.

tion of a decorative effect, and consists of finely executed plastic ribs and volutes, located at the transition of the shoulder into the belly of the amphorae-urns, while various hornlike additions or protrusions can be found on a large number of vessels.

The ornamentation of the Szeremle and that of the Dubovac-Žuto brdo group, apart from obvious matching motifs and concepts of decora-

tion – the separation of decoration zones and the formation of friezes and metopes – also have significant differences. They are primarily reflected in the wealth and variety of ornaments and ornamental compositions. New decorative motifs, which are unknown to the ornamentation of the Szeremle group, are a flowing meander and a flowing spiral, spiral discs connected by a loop, opposite pairs of arched lines with volutes at the ends, as well as hatched triangles or rhombuses with spiral tendrils arranged at the corners.³²

Both single-handled and double-handled beakers differ from Szeremle beakers, both in terms of shape, because they do not have a tiered shape and knee-shaped handles, and in terms of ornamental motifs, which are richer and more varied in the case of Dubovac–Žuto brdo beakers. Nevertheless, as a frequent ornament, concentric circles also appear on them, but much smaller and not so emphatically filled with white lime mass.

Analysing the ornamental motifs of the Szeremle and the Dubovac–Žuto brdo groups, with a brief review of the ornamentation of the Southern Danube and Northern Danube groups with encrusted pottery, certain facts become evident.

With its recognisable ornamentation, which is significantly different from the aforementioned groups, the Southern Danube group stands out the most. In addition, all these groups have common ornamental motifs that are present in an unchanged form. These are primarily a stamped circle filled with inlay, as well as a single or multiple V- or M-motif. On the other hand, neither in the ceramic nor in the ornamental repertoire of the Southern Danube group can one observe any excessive influence of other cultures, so that its ornamental style remains unchanged until the end.

As it seems, the Northern Danube group was much more susceptible to such influences, which ultimately had an impact on the further development of their ornamental style. This development can be traced through the basic ornamental scheme which, as we have already mentioned, is composed of three elements. In the Northern Danube group it is quite simple and reduced to a vertical motif of dot depressions, circles, or lines, but in the Szeremle group it becomes more diverse, with the use

³² Песковић 2013, 136, табела 9/2.

of different variants, and this diversity is particularly evident in the Dubovac–Žuto brdo group. Also, the development of this style provides a picture of an evolutionary sequence – from the Northern Danube, as the initial one, through Szeremle, to the Dubovac–Žuto brdo group, that is, the Gârla Mare–Cîrna group, as the last link in its development. Therefore, we must look for the foundations of this early style in the Northern Danube group, from whose direct influence and expansion Szeremle developed, and through it the Dubovac–Žuto brdo group.

Also, we cannot help but notice, in the ornamentation of the Danube groups with encrusted pottery, the sudden appearance of a much richer decorative style. This change will begin in the Szeremle group with somewhat simpler ornamentation, which will be taken over, supplemented, further developed, and culminated in the Dubovac–Žuto brdo group, that is, the Gârla Mare–Cîrna group.

Analysing the appearance of these new ornamental motifs – such as a multitude of circles, garlands, tendrils, and later in the Dubovac–Žuto brdo group of flowing spirals and meanders too – it is noticeable that such a sudden development of the decorative style cannot be attributed to the influence of neighbouring cultures in the environment, or only to local development. This push for further development, the richness of ornamentation, and the tendency to avoid empty, undecorated space on vessel surfaces, which is characteristic of the Greek geometric style, suggests the possibility that these influences can be attributed to impulses from the Aegean.³³

Chronology and periodisation

Placing certain cultures of the Bronze Age in appropriate time frames is a very complex issue, especially if you take into account the gaps and discrepancies in the chronologies that are applied in the surrounding countries and in our country.³⁴ When it comes to groups with encrusted pot-

³³ J. Vládar expresses the opinion that the bearers of the Northern Transdanubian group with encrusted pottery were exposed to Eastern European influences and impulses from the eastern Mediterranean, which they most likely accepted from the area of today's northern Italy and Switzerland. Vládar 1973, 266–334; Tasić, Dimitrijević & Jovanović 1979, 451–453.

³⁴ Mozsolics 1957, 145; Bóna 1975, 193–196; Kovács 1977, 82–83; Bándi 1984, 272; Marković 1984, 29–30; Tasić 1996, 147–162; Tasić 2004, 23–34; Пековић 2023, 16, Табела 5.

tery, the lack of metal objects, primarily discovered in safe cultural contexts, which would be a more reliable parameter for their dating, is also evident here. Therefore, when dating, we generally have to rely on typological analyses of ceramics and analogies with neighbouring groups and cultures, which does not always lead to complete and safe conclusions.

In the last few years, a significant contribution to the revision of assumptions about the chronology of the Bronze Age has been made thanks to a larger number of radiocarbon dates which however, it must be emphasised, are still insufficient. This statement is confirmed by N. Boroffka who, in his overview of the Bronze Age on the territory of Romania, Moldova, and Bulgaria, states that due to the insufficient number of these analyses, absolute dates are generally made on the basis of comparison with neighbouring areas.³⁵

For the chronology of the entire Carpathian basin, F. Gogâltan came up with the analysis of 178 dates.³⁶ Considering 118 new radiocarbon dates collected from sites in western and central Romania, dating to the period between the Late Copper Age and the early phase of the Late Bronze Age,³⁷ in an analysis of the chronology of the Early and Middle Bronze Age on the eastern border of the Carpathian basin, Gogâltan revised his earlier conclusions. This analysis has shown that, although significant progress has been made, there are still many unsolved questions related to Bronze Age cultures in the Carpathian basin.³⁸

At the end of the Early Bronze Age, in the area between the Danube river and lake Balaton, further towards the northern regions of the Carpathian basin, a core of cultures with encrusted ceramics was formed: the early phases of Vátya, Hatvan–Tokod, the early phase of Southern Pannonian and Northern Pannonian pottery.³⁹ After the stabilisation of these groups, there were migration movements towards the Croatian and Serbian Danube valleys.

³⁵ Boroffka 2013, 879, 881–889.

³⁶ Gogâltan 1999, 71–78.

³⁷ O'Shea et al. 2005, 86–87, fig. 9; Nicodemus & O'Shea 2015, 695.

³⁸ Gogâltan 2015, fig. 10, 23, 80.

³⁹ P. Patay divided the encrusted ceramics of the Carpathian basin into the Northern Pannonian area as a single closed cultural unit, and the area south of the Danube, and for these two genetically closely related groups he proposed the names Northern Pannonian encrusted pottery and Southern Transdanubian encrusted pottery, while Mozsolics proposed the terms Vezsprém and Szekszárd cultures. Patay 1938, 50; Mozsolics 1942, 87.

Based on the results of research so far, the earliest appearance of encrusted pottery in the Serbian Danube valley, that is, its spread in the direction of the south, coincides with the duration of the Vatin culture. In the Serbian Danube valley, the relative chronological affiliation of the earliest encrusted pottery is determined by its occurrence in closed units. Analysing these findings, the relative chronological affiliation of the oldest appearance of encrusted pottery, that is, the period of its presence in these areas, can be determined at the end of the Early Bronze Age – No. A2/A3.⁴⁰

In a paper on the Aegean migration, for the first time, A. Mozsolics mentions the possibility of distinguishing the Szeremle group in the area between the Danube and the Tisza rivers, south of the territory occupied by the Vatyá culture.⁴¹ After her, at the beginning of the sixties of the previous century, I. Bóna determined the time span of that group, the area in which it spread, and he tried to point out its importance in the development of Danube groups with encrusted pottery.⁴² Namely, in the opinion of Bóna, encrusted pottery came from autochthonous cultures, in the south Vučedol–Zók, and in the north the Late Vučedol culture with Kisapostag elements, and both, in their respective areas, developed in parallel. According to him, the northern group spread into the central and southern area between the Danube and the Tisza rivers, to the mouth of the river Olt, and further towards the lower reaches of the Danube river in Srem. In that area, the northern group mixed with the bearers of the Gerjen–Vatin–Verbicioara complex, which produced the Szeremle–Kubin–Cîrna culture at the end of BZ 3, according to his division of the Bronze Age, that is, at the time of the Br A2/Br B1 transition according to P. Reinecke.⁴³

Accepting Bóna's basic assumptions, and based on mobile material from 18 localities, G. Bándi and T. Kovács opined that these ceramic

⁴⁰ Bóna 1975, T. 7/5, 8; T. 250/19; T. 260/7–8; Петровић 1980, 57–64; Тасић 1983, 64; 1996, 149, T. 1/4a–c. The beaker from the grave in Vizić represents the earliest appearance of encrusted pottery from the Bronze Age on Serbian soil. We find such beakers in Kulcs-type necropoleis that I. Bóna places in the horizon of the early Vatyá culture, as well as in the necropoleis of encrusted pottery of the Southern Danube group: Szebén, Tiszaug–Kéménytető, and Szenetes, which he classifies as the Middle Bronze Age 1.

⁴¹ Mozsolics 1957, 145.

⁴² Bóna 1961, 14.

⁴³ Bóna 1975, 193–196.

types have their own characteristic physiognomy and that they can certainly be singled out as a separate group, and they also determined the area of its spread, its duration, as well as its origin. They derive the Szeremle group from the Northern Transdanubian encrusted pottery, that is, the Esztergom variant, which under pressure from the Mad'arovce culture, retreated towards the south-east down the river Sió, to its confluence with the Danube, and further to the area previously occupied by the Gerjen group, that is, the space between Danube and Tisza rivers. In that area, the Szeremle group stayed for a short time, at the time of Reinecke's phase Br B1, when it retreated to the area of southern Pannonia (Baranja, eastern Slavonia, Bačka, and southern Banat), before the encroaching culture of burial mounds; there it had a significant influence on the formation of groups with encrusted pottery Middle Bronze Age.⁴⁴

S. Foltini is of the opinion that the Litzen pottery, Somogyvár–Vinkovci, and Kisapostag cultures had a significant influence on the formation of Transdanubian encrusted pottery.⁴⁵ He did not agree with the thesis of Bándi and Kovács on the independence of the Szeremle group. Foltini pointed out that the evident mixing of Szeremle pottery with the forms of other groups, on the one hand, makes it easier to determine its chronology, but on the other hand it makes it difficult to single out the Szeremle group itself. He derived that opinion on the basis of the state of investigation of a single site in Hungary, which has the largest number of finds of the Szeremle group, and was singled out by Bándi and Kovács, but based only on surface finds, while at other sites the ceramics are found in closed units with ceramics from other groups – the Vátya group, Southern Transdanubian, and so on. Accordingly, Foltini posits that it is a ceramic type or an ornamental style. Also, he is of the opinion that, de-

⁴⁴ Bándi & Kovács 1970, 27–28; Hänsel 1982, 31–32. B. Hänsel considers the thesis on the migration of the Szeremle group during the Middle Bronze Age from north-western Hungary to the Iron Gates unrealistic, pointing out that there are no reliable data for this.

⁴⁵ At the end of the Early Bronze Age, the territory occupied by the Somogyvár–Vinkovci culture was penetrated by new, southern population groups. Their mixing with the local community led to the formation of the Kisapostag culture. The bearers of this culture soon occupied almost the entire Danube region, except for the western parts, that is, the districts of Vajdaság and Zala. The settlements of the Kisapostag culture were located in the north along the Danube, in the south along the Drava, and the western border is represented by the Rinya marshland around Kis-Balaton, the Marcal and Rába rivers in the west, while in the east the rivers Danube and Sió.

spite the mobile archaeological material indicating that the end of the Szeremle style coincides with the beginning of the Hügelgräber culture, there are no clear indications of a violent interruption of Transdanubian encrusted pottery. He considers the influence of the Szeremle style insignificant for the development of the developed and late Bronze Age cultures of the southern part of the Carpathian basin, and disputes the opinions on the influence of this style in the formation of the Dubovac–Žuto brdo group.⁴⁶

In a paper on Transdanubian cultures with encrusted pottery, G. Bándi revised the opinion expressed in earlier works with T. Kovács.⁴⁷ Namely, he places the appearance and formation of the Northern and Southern Transdanubian groups at the same time, at the end of Br A1 according to Reinecke. In the earliest phase of their existence, in the Tokod and Hatvan cultures, there are certain signs of the presence of the southern group, while the pottery of the northern group has not been ascertained in the neighbouring cultures. A little bit later, according to him, with the expansion of the northern group along the Danube, relations were established with the cultures of Vátya and Füzesabony, while the southern group hardly had any contact with the neighbouring cultures. The penetration of the Mad'arovce culture into the area of the northern group will lead to significant changes and the beginning of the Koszider period, as well as the movement of the bearers of the northern group through the area of the Vátya culture to the south. South of the mouth of the Sió river and in the southern parts of the confluence of the Danube and Tisza rivers, they will form the Szeremle group. Bándi places these events in the first half of Br B1 according to Reinecke. He also states that the Szeremle and the Southern Transdanubian group in the area between the Danube and the Drava rivers continued to exist at the same time, until the emergence of the Hügelgräber culture, that is, until the end of Br B1 according to Reinecke.⁴⁸

In a paper on the territorial and chronological position of the Szeremle group in the Bronze Age of the southern Carpathian basin, T. Kovács states that the Szeremle group was created on the basis of Southern Transdanubian encrusted pottery, as well as the Gerjen and Mad'ar-

⁴⁶ Foltini 1983, 164–166; Foltini 1955, 169–173.

⁴⁷ Bándi 1984, 267–274, T. LXXIV–LXXX.

⁴⁸ Bándi 1984, 272–273.

ovce cultures.⁴⁹ In that work, he includes sites in Baranja and eastern Slavonia as the parent area of the Szeremle group.⁵⁰ He is still of the opinion expressed in the work with G. Bándi, that it had a significant influence on the formation of the Dubovac–Žuto brdo group as well as the creation of the Cîrna–Gârla Mare culture. Based on the bronze objects on the territory of the Szeremle group and the analysis of the decorations on the anthropomorphic figurines, Kovács places this group in the Br B1 period, and the end of its independence in the transition period Br B1/ Br B2 according to Reinecke's chronology.⁵¹

Apart from the Hungarians, archaeologists in neighbouring countries also dealt with the problem of groups with encrusted pottery.

In the central part of the Carpathian basin, based on typological characteristics of encrusted pottery, Czechoslovakian archaeologists, like their Hungarian colleagues, distinguished two cultural groups: Northern Pannonian and Southern Transdanubian groups with encrusted pottery. They determined the stratigraphic position of Northern Pannonian encrusted pottery at several sites in Slovakia. At the site of Malé Kosihy, A. Točík established that after the layer with Langyel and Baden ceramics, there followed a Nagyrév layer, then a layer with Hatvan ceramics, and finally came layer IV. which belongs to the Mad'arovce group with find-

⁴⁹ Пековић 2013, 149, карта 6.

⁵⁰ Kovács 1988, 155–168. Croatian archaeologists do not agree with this statement by Kovács; they identify the largest number of those sites that he attributed to the motherland of the Szeremle group, especially those in north-eastern Slavonia, as sites of the Dalj–Bijelo brdo group; Пековић 2013, 147, карта 5. Regarding the material from those localities, they say that Kovács ignores the local peculiarities that are expressed in the Dalj–Bijelo brdo group, namely, the appearance of Litzen pottery in the community with the Southern Transdanubian encrusted pottery, and that only some elements of the Szeremle group can be observed on that pottery. Majnarić-Pandžić 1984, 81–82; Majnarić-Pandžić 1989, 49. Croatian archaeologists explain the impossibility of distinguishing Szeremle from Dalj–Bijelo brdo pottery by saying that some forms of vessels were taken from the Szeremle group, which were modified and adapted to their taste, rather than by import from the area of this group, and finally by the possibility that there were no clear boundaries between these groups. The main argument for distinguishing Dalj–Bijelo brdo from the Szeremle group is the appearance of anthropomorphic plastic, which they claim to be unknown to the Szeremle group. Also, on the basis of anthropomorphic plastic and the shape of vessels, as well as the way they were decorated, western and southern Bačka as well as certain localities in Banat are included in the area covered by the Dalj–Bijelo brdo group. Majnarić-Pandžić 1990, 49; Šimić 2000, 60–61, 105, 138–140.

⁵¹ Kovács 1988, 168.

ings of Northern Pannonian encrusted pottery, which would correspond to the period from the end of Br A.⁵²

According to M. Dušek, the Northern Transdanubian group spread and developed in the territory north of today's Budapest and covered a good part of Slovakia, while the area east of lake Balaton to the Danube, and from Budapest to Slavonia, was inhabited by the Southern Transdanubian group. He gave a comprehensive list of Northern Pannonian pottery sites in Slovakia itself (Patnice, Malé Kosihy, Nitrianski Hrádok, Sturnovo, etc.), as well as numerous localities in Hungary where this pottery appears as an import in Southern Transdanubian encrusted pottery sites (Gerjen–Kölesd, Medina–Harc–Szekszárd, etc.). Based on the material of one group and the other, which appears at certain sites, Dušek concluded that this points to their common origin and simultaneous development. Also, based on the research of the Patince necropolis as well as the sites in Hungary – where Northern Pannonian encrusted pottery was found in Hatvan, that is, in the Tószeg C horizon – he concluded that two phases can be distinguished in the development of encrusted pottery.⁵³ In his opinion, the older phase would belong to the time from the end of Br A/B, and the younger one would cover the entire Middle Bronze Age.

The first papers relating to the issue of encrusted pottery in Bulgaria come from B. Mikov.⁵⁴ As part of the discussion about the Late Bronze Age of north-western Bulgaria, he looked at the problem of inlaid ceramics, placing them in the 12th century BC. After him, T. Filipov used a smaller part of the material from the necropolis in Orsoya, collected after several years of research, and published it only for typological analysis, without engaging in chronological discussions. Similarly to him, A. Bonev performed a typological analysis of this material, but he also discussed the problems of chronological interpretation, that is, he determined this necropolis to be from the Late Bronze Age.⁵⁵ In recent papers, based on C 14 analysis from Baley, a short-lived multi-family settlement where

⁵² Točík 1958, 19.

⁵³ Dušek 1969, 211–214, 235–246.

⁵⁴ Миков 1970, 48–63.

⁵⁵ Филипов 1976; Бонев 2000, 3–32. Although 267 graves were discovered at this necropolis, in these analyses both authors used material from 180 graves, and they are also not reliable because there is no appropriate documentation from the excavations. The material from this necropolis is kept in the museum in Lom.

four residential horizons of the Žuto brdo culture were distinguished, A. Boyadziev dated the oldest horizon (layer 4) to around the 12th century.⁵⁶ He connected this oldest horizon with the typical phase in the development of the Žuto brdo culture. A little later, however, T. Shalганова connected horizons 3–4 from Baley with the classic phase of the Žuto brdo culture by comparing them with the necropoleis in Cîrna and Korbovo. She calls the cultures of the Late Bronze Age in north-western Bulgaria Novo selo–Baley, Baley–Orsoya, and indicates that the percentage of fluted ceramics increases towards the end of the cultures with encrusted pottery, bringing the appearance of this pottery into connection with other cultures at the end of the Middle and the beginning of the Late Bronze Age in the neighbouring areas, that is, Paraćin II, Verbicioara V, Tei V, which especially refers to Belegiš II–Cruceni or Belegiš II–Bobda according to N. Tasić's division. She states that the Baley II settlement, in addition to shapes similar to Žuto brdo pottery, contains 12% of fluted pottery and belongs to the Bistreţ–Işalniţa horizon, that is, to the time around the 12th century. This date – the end of cultures with encrusted pottery – is also confirmed by the deposit of metal objects from Florentin, which belongs to hoards of the II horizon – Ha A1.⁵⁷

In Romania, several authors dealt with the chronology of the Žuto brdo–Gârla Mare group. After researching the necropolis in Cîrna, Dumitrescu dated the most significant site of this group in Oltenia to the Middle Bronze Age, distinguishing the zone of older and younger graves.⁵⁸

I. Chicideanu agrees with that dating and points out that the necropolis represents an independent phase of the Gârla Mare group. S. Morintz dates the Žuto brdo–Gârla Mare group to Br B/C–Br D and distinguishes four phases of this group.⁵⁹ M. Gumă places that group in the Romanian part of Banat, in which he distinguishes three phases, in the Br B2–Br D period according to Reinecke. Like Morintz, he also supports the thesis about the role of the Szeremle group in the formation of the Žuto brdo–Gârla Mare group.⁶⁰

⁵⁶ Boyadziev 1995, 93. A more recent radiocarbon analysis from Baley gave significantly higher dates for the isolated horizons, i.e., the time of 1530 to 1390 BC. Motzoi-Chicideanu 2009, 2.

⁵⁷ Шалганова 1993, 93.

⁵⁸ Dumitrescu 1961, 355.

⁵⁹ Morintz 1978, 193–194.

⁶⁰ Gumă 1997, 130–133, 194.

Based on the results of the research of the site in Oltenia, as well as the multi-layered settlement on the site of Ostrovul Corbului, P. Roman and B. Hänsel, considering the problem of the emergence of Danube groups with encrusted pottery in the Middle Bronze Age, present an opinion denying the influence of the Szeremle group in the emergence of Lower Danube groups with encrusted pottery.⁶¹ Roman considers the finds of Gârla Mare from the Ostrovul Corbului site to be the oldest phase of the development of this group and places them in the time frame with the Verbicioara III phase, which indicates that these finds are older than the appearance of Szeremle pottery in southern Hungary, and therefore disputes its influence in the emergence of the Lower Danubian group with encrusted pottery. In the same paper, Hänsel is of the opinion that the settlement existed in the developed phase of the Gârla Mare group, and he does not discuss the influence of the Szeremle group, but rather defines the early finds of Gârla Mare in the chronological framework of its periodisation for the middle Danube region, phases MD I/MD II, which would mean at the very end phase Br A3, that is, the beginning of phase B1 of the amended Reinecke chronology for Central Europe.

B. Hänsel, although one of the biggest critics of the Hungarian chronological system,⁶² which was established by A. Mozsolics and I. Bóna, and which is still used with minor changes in Hungary, when publishing the findings from the Ostrovul Corbului settlement ignored the fact of the unreliable dating of the appearance and duration of the Szeremle group, which was given by Bándi and Kovács, and which gives temporal priority to the Gârla Mare culture in relation to the Szeremle group.⁶³ Unlike Roman, in that paper Hänsel also performed a typological analysis of the finds, and it should be said that the largest part was found in the moat of the settlement, in a secondary position, without clear stratigraphic data. On the basis of the Mad'arovce beakers and a series of vessels of a similar shape (cups, biconical bowls, bowls with an S-profile), which he points out are contemporaneous with those bea-

⁶¹ Hänsel & Roman 1984, 188–229.

⁶² Hänsel 1968, 74–75.

⁶³ Bándi & Kovács 1970, 39; Bándi & Kovács 1974, 110; Hänsel & Roman 1984, 223.

kers,⁶⁴ as well as two bronze pins with a biconical head,⁶⁵ discovered in the settlement layer, Hänsel concluded that the formation of the Gârla Mare group began at the time Br A3/Br B1 according to Reinecke, that is, the end of its FD III phase and the beginning of the MD I phase. With this statement, Hänsel gives temporal priority to the Gârla Mare group in relation to Szeremle, and thus calls into question the participation of Szeremle groups in the origin of this culture.⁶⁶

In a synthetic paper on the culture of Žuto brdo–Gârla Mare, M. Șandor-Chicideanu is of the opinion that the Szeremle group played a significant role in the formation and development of the Žuto brdo–Gârla Mare culture. She cites the site of Liubcova–Țiglărie as the easternmost find of this group – most probably including Ostrovul Corbului. Based on the results of the research of a large number of sites, she concludes that there were three phases in the development of the Žuto brdo–Gârla Mare culture. The early phase corresponds to the end of Br A according to Reinecke's periodisation, the classic phase would correspond to the beginning of the first phase of the Belegiš–Cruceni culture (Br B2–C), and the final phase which Șandor-Chicideanu dates based on

⁶⁴ Apart from the Maďarovce beaker, close analogies for the other vessels, both in terms of shape and ornamentation, and which Hänsel and Roman refer to and on the basis of which, among other things, they give temporal priority to the Gârla Mare group, can be found at localities in Serbia – At, Ludoš, Kovin, Feudvar, and Stubarlija – and on which elements of the Szeremle style are clearly visible. Also, these analogies, from the mentioned localities in Serbia, are also evident at the Liubcova–Țiglărie site (Gumă 1997, pl. LXXV/5–7), which may indicate the route by which the Szeremle style reached south-western Romania, as well as their close chronological connections. The Szeremle style can be also observed on certain vessels from the Balta Verde and Ostrovul Mare sites, which belong to the older phase of the Gârla Mare group, that is the Cîrna I phase. Berciu & Comșa 1956, fig. 12, 26. According to the researchers, the Ostrovul Corbului settlement yielded findings of the oldest phase of the Gârla Mare group (according to M. Gumă – proto-Gârla Mare), that is, Br B1, which in the southern Carpathian basin corresponds to the time of the stabilisation of the Szeremle group. Taking into account the opinion of T. Kovács, if the end of the independent existence of the Szeremle group corresponds to the Br B1/Br B2 period, then Br B1 could be seen as a period of transformation, in symbiosis with autochthonous traditions, into new stylistic expressions, which is reflected in richer and more complex ornamentation.

⁶⁵ Hänsel & Roman 1984, сл. 7/1, сл. 6/2–3; Typologically, these needles can be compared with needle from the necropolis of the Northern Danube group Mosonszentmiklós–Jánosháza-pusztá, i.e., the needle from grave 50. The greater concentration of these needles is in the area of northern Transdanubia and south-western Slovakia, from where the Maďarovce type bakers originate.

⁶⁶ Hänsel & Roman 1984, 198.

certain bronze objects from Horizon II from Baley, typical of the Br D period, in the 12th century BC.⁶⁷ In addition, she is of the opinion that the bearers of the Szeremle communities had a significant influence on the formation of the Belegiš–Cruceni culture.⁶⁸

Several archaeologists have dealt with the chronology of the Dubovac–Žuto brdo group in Serbia. As early as the beginning of the 20th century, in a study on Žuto brdo, which resulted from the excavation and reconnaissance of the narrower part of the Danube in Serbia, M. Vasić attributed the finds of encrusted pottery from this area to the Hallstatt period, that is between 800 and 500 BC.⁶⁹

Between the two World wars, N. Vulić and M. Grbić, in the chronological system of the prehistory of Serbia, dated those findings to the late Bronze and early Hallstatt ages.⁷⁰

Systematising and chronological determination of archaeological material from the territory of Serbia, Vojvodina and northern Croatia, V. Milojčić, in his extensive work on prehistoric cultures from the early Neolithic to the early Bronze Age, in setting the starting point considered, among other things, the problem of encrusted pottery. Accepting the chronological system set by P. Reinecke, Milojčić linked the appearance of encrusted pottery with the end of the Early Bronze Age, that is, the Br A2/B1 phase.⁷¹

A turning point in the study of prehistoric cultures on our soil is represented by two large synthetic publications on the prehistory of Serbia and Vojvodina, with a comprehensive presentation of archaeological material.

In a comprehensive publication on the prehistory of Serbia, M. Garašanin considered the Vatin, Paraćin, and West Serbian variants of the Vatin culture to be crucial for the formation of the Dubovac–Žuto brdo group, although in one place – without discussing them at all – he men-

⁶⁷ Șandor-Chicideanu 2003, 209; Шалганова 1993, 89.

⁶⁸ Șandor-Chicideanu 2003, 217; Szentmiklósi 2006, 231.

⁶⁹ Васић 1907, 1–48; Wosinsky 1904, 63–73; Hoernes & Menghin 1925, 408; Childe 1929, 284–290; Berciu 1939, 242–244.

⁷⁰ Vulić & Grbić 1937, 53; Грбић 1939, 57–59.

⁷¹ Milojčić 1953, 264, Abb. 42; Milojčić 1959, 72. With minor corrections, other researchers of the Bronze Age of the Carpathian basin – Patay, Mozsolics, Bóna, Dušek, and others, agreed with his opinion.

tions the Southern Pannonian and Bijelo brdo groups.⁷² In his later works, he revised his position and asserted that the Dubovac–Žuto brdo group is a foreign phenomenon and that it was created by the expansion, along the Danube, of the Southern Pannonian group with encrusted pottery. M. Garašanin dated the Dubovac–Žuto brdo group to the Middle and Late Bronze Age, that is, Br B to Br D/Ha A. He supported this dating with chronologically sensitive objects, closed units, or sites that are definitively assigned to the Dubovac–Žuto brdo group. He particularly pointed to the metal finds from Kličevac, Žuto brdo, Velika Vrbica, and the Ostrovl Corbului site in Oltenia.⁷³

The problem of groups with encrusted pottery was also dealt with on several occasions by R. Rašajski, who considered that the necropoleis in At and Orešac are older than similar phenomena in south-eastern Banat, and saw in them a foundation – which was created by the fusion of the Szeremle group with the native populations, Vatin, and possibly the Verbicioara cultures – from which the Dubovac culture developed.⁷⁴

N. Majnarić-Pandžić is of a similar opinion, with the added fact that she sees the development of the Dubovac culture under a more significant influence from the north-west than from the Verbicioara and Vatin cultures, and considers the graves from the At necropolis, which she directly links to the Szeremle group, to be the earliest appearance of encrusted pottery in south-eastern Banat.⁷⁵

Presenting the results of his research, P. Medović supported the opinion of F. Falkenstein that all southern areas up to western Banat (Baranja, Slavonia, Bačka, and Srem) enter the zone of influence of the Szeremle group, and that Dubovac and Cîrna are the eastern variant of encrusted pottery with their own specificities.⁷⁶ Summarising the results of research in eastern Bačka and central Banat, and on the basis of a large number of newly discovered sites with encrusted pottery, Medović concluded that all of southern Bačka and central Banat belong to the zone of encrusted pottery of the Middle Bronze Age, that is, he posits that this area had influences from the west (Szeremle group) as well as from the

⁷² Гарашанин 1973, 338, 350.

⁷³ Гарашанин 1973, 342; M. Garašanin 1983, 522; Крстић 1996, 103.

⁷⁴ Рашајски 1975a, 17; Рашајски 1975b, 55–56; Rašajski 1984, 41–42.

⁷⁵ Majnarić-Pandžić 1985, 41–55, Majnarić-Pandžić 1989, 48.

⁷⁶ Falkenstein 1998, 270.

south-east (Dubovac group),⁷⁷ which is evidenced by material from the settlement layers from the Feudvar settlement⁷⁸ as well as the burial units and individual finds from the necropolis of this settlement – Stubarlija. He defined the Middle Bronze Age of Vojvodina as the period from 1600 up to 1300 BC, and the older phase of encrusted pottery from 1600 up to 1500 BC.⁷⁹

Of all the researchers, however, N. Tasić dealt with this problem the most. In several synthetic works, he presented a thesis on the migration of the bearers of encrusted pottery to the south, which he explained by their retreat before the penetration of the bearers of the Hügelgräber culture.⁸⁰ According to him, this resulted in the formation of the Szeremle style in Baranja and at the confluence of the Danube and Tisza rivers, and in southern Banat, south-western Romania and north-western Bulgaria the creation of a secondary centre of encrusted pottery cultures. Tasić singles out two groups of encrusted pottery in the Danube valley, namely the Northern or the Baranja–Bačka group, the beginning of which he links to the end of the Early Bronze Age; and the Southern or Banat–Serbian Danube group, which he defines as the beginning of the Middle Bronze Age. He places the northern group in the area between the Danube and the Drava rivers, and on the left bank of the Danube river in Bačka, while the southern group includes sites in Serbian and Romanian Banat, Đerdap, Oltenia and north-western Bulgaria. According to Tasić, the Southern or Banat–Serbian Danube group had two phases. The first is the Dubovac phase (Dubovac–Cîrna–Gârla Mare), which developed in parallel with the Szeremle group and the late phase of the Vátya culture, that is, in the Br B2–C1 period, when the bearers of the Hügelgräber culture appear in the greater part of the Carpathian basin. As a dominant phenomenon in the early phase, Tasić singles out tiered vessels, urns, and beakers, which appear in different variants in cultures from Slovakia and Hungary to Banat and Oltenia. With the penetration of the Hügelgräber and the spread of the Belegiš I culture, Dubovac culture is pushed south, along the Danube, where it continues its life through the second phase, the Žuto brdo phase, which lasts until the end of the

⁷⁷ Medović 1996, 163–166, karta 1.

⁷⁸ Hänsel & Medović 1994, 192.

⁷⁹ Medović 2007, 43, 65.

⁸⁰ Тасић 1965, 49–65; Tasić 1974, 227–228.

Bronze Age, that is, until Br C–D. According to him, this phase is characterised by pear-shaped urns, beakers with one and two handles, stands for urns, and so on. Also, this division is supported by differences in anthropomorphic plastic.⁸¹

Conclusion

The chronological placement of individual cultures of the Bronze Age is a very complex issue. The fact is that a large number of authors who dealt with the problem of groups with encrusted pottery have different opinions. These opinions coincide to some extent in certain segments, but none of them can be said with certainty to be completely proven archaeologically. The biggest disagreements relate to the origin, independence and importance of the Szeremle group, style or type of ceramics, as well as its influence on the formation of the culture of encrusted pottery in the lower Danube, while they generally agree on the theory of the migration of bearers of encrusted pottery cultures down the Danube, under the pressure of the Hügelgräber culture.

It is evident that a wider complex of cultures with encrusted pottery was formed in the area from the north of Slovakia, Transdanubia, the confluence of the Danube and the Tisza, to the lower Danube during the Bronze Age. In that significant space, regional groups, but also chronological phases of the same culture, are undoubtedly distinguished. In a chronological sense, one can single out the older appearance of that complex with the early phase of the Vátya culture and encrusted Danube (Northern and Southern) pottery, and the younger appearance, that is, Szeremle (group, phase or style), as well as cultures in the south-eastern areas, Dubovac–Žuto brdo–Gârla Mare.

Considering the geographical distribution of Bronze Age sites with encrusted pottery in the Serbian and Croatian Danube valleys, that is, from the area between the rivers Danube and Tisza, through Baranja and north-eastern Slavonia, then through southern Bačka to Banat, it is evident that it coincides with possible movements down the Danube river.

⁸¹ Tasić 1983, 77–82; Tasić 1996, 147–154. The two chronological phases were derived by Tasić on the basis of well researched and published necropoleis in Romania (Cîrna, Ostrovul Mare, Balta Verde), that is, on the basis of the typological characteristics of the materials – ceramics and rare metal finds.

Only sporadic findings of that pottery in Srem show that that territory was at least partially influenced by those cultural currents. Taking into account the direction of the spread of Bronze Age encrusted pottery, the sites registered in Baranja and Bačka should be slightly older than the sites in Banat and the lower Danube valley.

Based on previous research and the analysis of Danubian encrusted pottery, the most acceptable theory is the penetration of the Mad'arovce culture into the area of the northern group, which led to their movement through the area of the Vatia culture to the south. South of the mouth of the Sió river and in the southern parts of the confluence of the Danube and Tisa rivers, under the influence of the Southern and Northern Danube style, the Szeremle group, a style or phase in the development of encrusted pottery, was formed. In the decorative repertoire of Szeremle pottery, motifs from the Northern Danube remain and prevail, while those from Southern Danube pottery appear to a much lesser extent. With further migrations to the area between the Danube and the Drava, Szeremle and the Southern Danube group coexisted, as evidenced by finds from several sites in this area, until the emergence of the Hügelgräber culture, that is, the Br A2/Br B1 period according to Reinecke. The further expansion of this style takes place towards the south and can certainly be traced to the confluence of the Sava and the Danube rivers. These impulses from the north-west can be seen in the territory of Banat, the Serbian Danube valley, Đerdap, and Oltenia, where a very strong, secondary centre of cultures with encrusted pottery – Dubovac–Žuto brdo–Gârla Mare – is formed.

The occurrence of the Dubovac–Žuto brdo cultural group still causes considerable confusion today. To what extent had the bearers of the Szeremle group, type or ceramic style succeeded in infiltrating the area occupied by the bearers of the Vatin and Verbicioara cultures, and to what extent did they influence the formation of that secondary centre with encrusted pottery, is still an open question. Bearing in mind the shapes of the vessels and the ornamentation of the Danube groups with encrusted pottery, we cannot fail to notice the development of a unique decorative style that will most likely transform into new stylistic expressions in symbiosis with autochthonous traditions, which is reflected in richer and more complex ornamentation. Also, the development of this style provides a picture of an evolutionary sequence, from the Southern

PERIODIZACIJA	VERBICIOARA I-II	VATIN	JUŽ. TRANSDANUBIJSKA INKRUSTOVANA KERAMIKA	SZEREMLE	DUBOVAC - ŽUTO BRDO	BELEGIŠ - CRUCENI	APSOLUTNA HRONOLOGIJA
Br A1							2400 / 2300 — 2000
Br A2							2000 / 1950 — 1700
Br B1							1700 / 1600
Br B2							— 1500
Br C1							1500 —
Br C2							—
Br D							1300 —
Ha A1							1200 —
Ha A2							1100 —

Table 10. Chronological table.

and Northern Danube groups, as the beginning, through Szeremle, to the Dubovac–Žuto brdo, or Gârla Mare–Cîrna group, as the last link in its development.

The presented data show that encrusted pottery of the Szeremle group appeared on Serbian soil at the end of the Early Bronze Age – Br A₃/B₁ – and that the further existence of this group can be traced to the Br B₂/ Br C₁ period. This development, followed in the wider area that those cultures occupied, can be expressed through the given chronological table (Table 10).⁸²

⁸² Radiocarbon chronology for the Bronze Age of Europe according to Harding was used to create the chronological table. Harding 2000, 18.

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Piotr Włodarczak*

*Institute of Archaeology and Ethnology,
Polish Academy of Sciences
Warsaw, Poland*

Yamna culture in Bačka and Serbian Banat

Abstract: The Vojvodina area is one of the least explored expansion zones of steppe barrow communities of Eastern European origin. New data on this issue was obtained by implementing the Polish–Serbian project “Danubian Route of the Yamnaya Culture”. As part of the project, two burial mounds located in Bačka, in the Šajkaška region, were examined (Šajkaš, Ciganska Humka, and Žabalj, Medisova Humka). These studies collected comprehensive data on the stratigraphy of the burial mounds and details of the funeral rites and mortuary practices. Materials for bioarchaeological and chronometric analyses were also obtained. The newly discovered graves, along with those from previously examined burial mounds in the territory of Vojvodina, exhibit features typical of the funeral rites of steppe communities from the first half of the third millennium BC, associated with the Yamna culture throughout the Pannonian plain. It is also a rite analogous to the entire Danube–Tisza zone of expansion of this culture. In light of the research, the Pre-Yamna horizon (fourth millennium BC) is poorly visible, including the phase of barrow graves with cremation burials, connected with the Baden–Coţofeni circle. A series of radiocarbon dates were obtained for barrow graves from Bačka and Banat. The results place the dated finds in two time horizons: early Yamna (3000–2900 BC) and late Yamna (2900/2800–2600 BC).

Key words: Yamna culture, Vojvodina, Šajkaška, barrows, funeral rite, absolute chronology

Introduction

Recent intensive research has focused on the expansion of barrow cultures into Europe during the fourth and third millennia BC, thanks to which data have been obtained for many regions, specifying the chronol-

* p.wlodarczak@iaepan.edu.pl

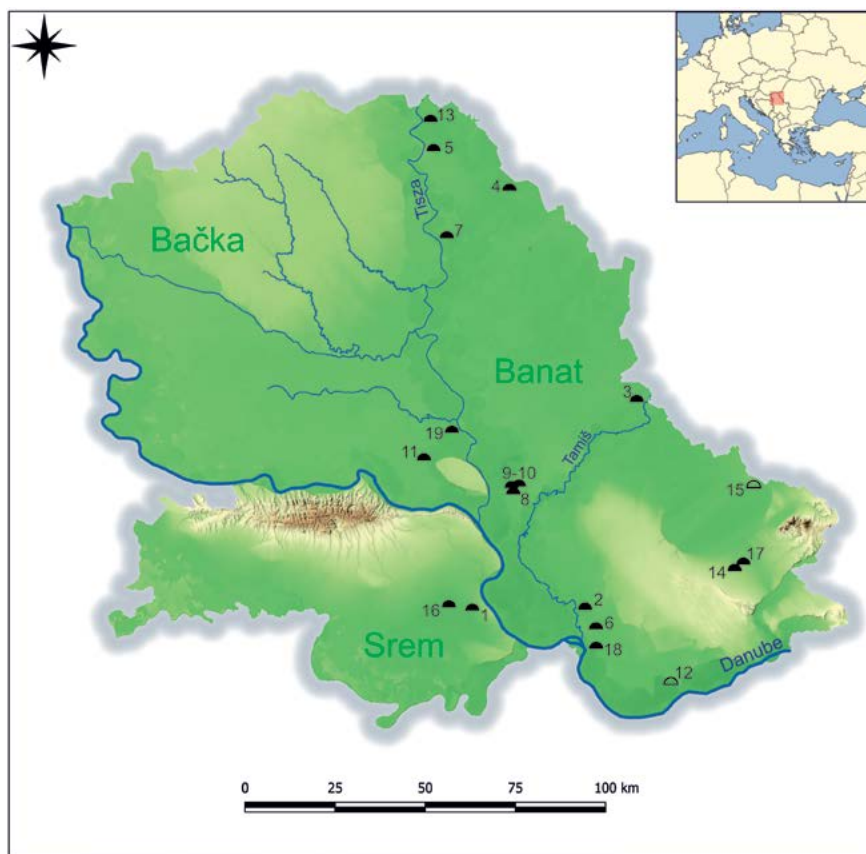


Fig. 1. Location of barrows in the area of Vojvodina

1 – Batajnica, Velika Humka; 2 – Jabuka, Tri Humke; 3 – Jaša Tomić, Velika Humka; 4 – Mokrin, Arađanska Humka; 5 – Novi Kneževac, Japina Koliba; 6 – Pančevo–Livade; 7 – Padej, Humka u Barnahatu; 8 – Perlez–Batka C, Pašićeva Humka, 9–10 – Perlez–Vuna, barrows 9 and 10; 11 – Šajkaš, Ciganska Humka; 12 – Skorenovac, Grmušina Humka; 13 – Srpski Krstur, Slatinska Humka; 14 – Uljma, Itebejčeva Humka; 15 – Vatin; 16 – Vojka, Humka kod Velikog Begeja; 17 – Vlajkovać, Straža; 18 – Vojlovica, Rafinerija Nafte, 19 – Žabalj, Medisova Humka.

ogies and presenting the details of the funeral ritual. The primary factor driving this intensified research are the results of archaeogenetic analyses showing the role of the expansion of the Yamna culture community (the term in Ukrainian and Bulgarian languages = Pit-Grave culture) in the

demographic and cultural changes on the European continent at the beginning of the Bronze Age (the turn of the fourth and third millennium BC). Among the important regions exploited by nomadic communities of Eastern European origin, the area of the lowlands on the lower Tisza River – that is, the areas of Bačka and the Serbian part of Banat – has so far been relatively poorly explored (Fig. 1). It is the southern part of the Pannonian plain. Only a few burial mounds have been examined in this zone, in most cases only partially.¹ Therefore, attempts to summarise their chronology are poorly documented and sometimes controversial.² The Polish–Serbian project implemented in 2016–2021 aimed to examine two burial mounds in the Šajkaška region (southern Bačka). Thanks to field work, the hope was that better data would be obtained than previously available on the Yamna culture barrow ritual in Vojvodina. In addition, an important goal was to obtain bone materials for bioarchaeological research, especially archaeogenetic research. In 2016–2018, two burial mounds located in the Šajkaška region were examined: Ciganska Humka in Šajkaš, and Medisova Humka in Žabalj. They were located within a cluster of barrows on the loess terrace of the Tisza, between the towns of Gardinovci and Bačko Gradište.

Excavations were carried out thanks to a cooperation agreement signed between the Museum of Vojvodina in Novi Sad and the Institute of Archaeology and Ethnology of the Polish Academy of Sciences. They were financed thanks to a grant from the National Science Centre (Kraków, Poland), entitled “Danubian route of the Yamnaya culture” (no. NCN OPUS 2015/17/B/HS3/01327). The head of research on the Serbian side was Jovan Koledin (Museum of Vojvodina).

Šajkaš, “Ciganska Humka” and chronological differentiation of barrow rituals

In 2016, research was carried out on Ciganska Humka (Fig. 2) in Šajkaš, Titel municipality.³ The barrow was two-phase (Fig. 3). The older mound had a diameter of about 25 meters and a height of about 2.5 meters. Its

¹ Jovanović 1974; Јовановић 1975; Jovanović 1979; Girić 1982; Girić 1987; Tasić 1995; Tasić 2003–2004; Тасић 2006; Koledin et al. 2020; Włodarczak 2021a.

² Тасић 2006; Спасић 2016.

³ Бугај et al. 2018; Bugaj et al. 2021.



Fig. 2. Šajkaš, Ciganska Humka. Photo by J. Koledin.

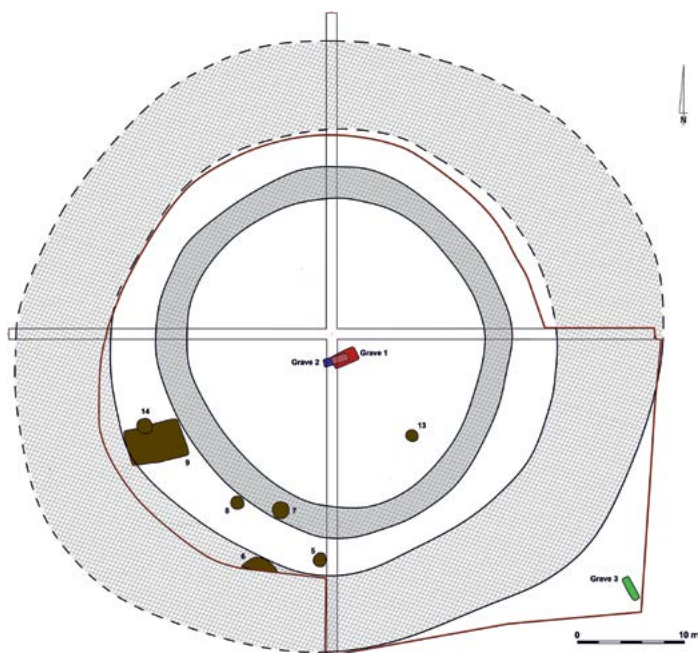


Fig. 3. Šajkaš, Ciganska Humka. Plan of the barrow. Acc. to Bugaj et al. 2021.



Fig. 4. Šajkaš, Ciganska Humka. Grave 2. Photo by P. Włodarczak.

primary feature, grave (?) No. 2 was a narrow pit (2.5×0.9 m), shallowly dug into the original ground level. The bottom and lower parts of the walls were covered with wood, creating a characteristic box construction.⁴ A white, calcareous substance was recorded at the bottom of the pit. However, no human bones or grave goods were found (Fig. 4). In the mound built above this object, numerous animal bones were discovered,⁵ and few, non-specific fragments of pottery with technological features indicating the beginning of the third millennium BC.

Grave 1 was dug into the older mound, directly above feature 2 (Fig. 5). Then, over the newly dug grave, the mound was built up, which reached its final dimensions (diameter of approximately 40 meters, and

⁴ Włodarczak 2021b.

⁵ Makowicz-Poliszt 2021.

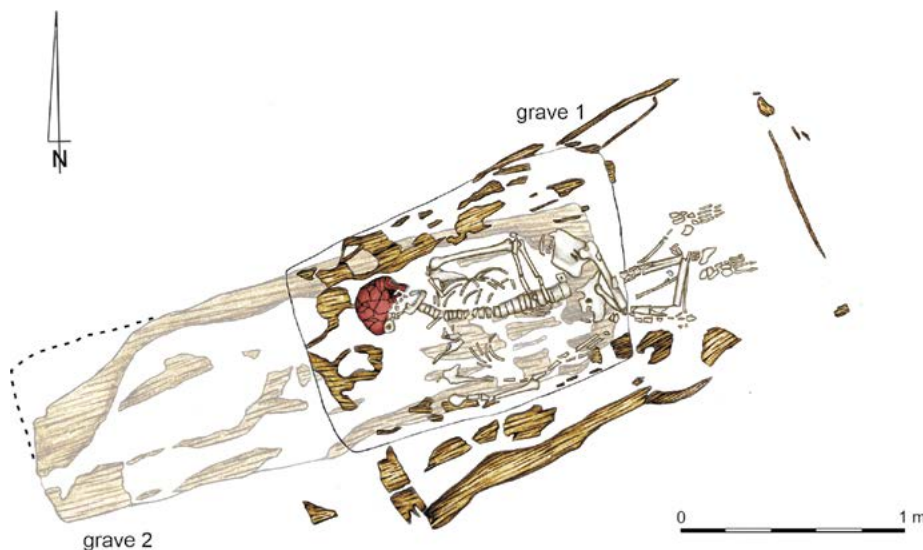


Fig. 5. Šajkaš, Ciganska Humka. Graves 1 and 2. Drawing by M. Podsiadło.

reconstructed height of approximately 3 meters). In site 1, the burial of a woman over 40 years old was discovered (the sex of the deceased was determined based on genetic analysis).⁶ She was placed on her back, with her lower limbs tucked up, and her head oriented westwards. There were faint traces of ochre on the bones. However, no grave goods were found. Most of the skeleton underwent secondary displacement due to the destruction of the roof of grave 2. Despite the burial sliding into the chamber of an older grave, the original arrangement of the deceased's body has been quite clearly preserved (Fig. 6).

The result of the research in Šajkaš was the discovery of two graves with a clear stratigraphic arrangement. They presented different construction features. Grave 1 was a spacious chamber with a wooden roof and floor elements. A skeleton was discovered there, arranged in a manner characteristic of the late Yamna culture from the Pannonian plain. Similar graves were discovered in three nearby barrows on the other bank of the Tisza: in Perlez–Vuna, Barrows 9 and 10, and Batka C, Pašićeva Humka.⁷

⁶ Novak 2021.

⁷ Medović 1987.



Fig. 6. Šajkaš, Ciganska Humka. Grave 1. Photo by P. Włodarczak.

Despite the lack of burial traces, grave 2 from Šajkaš can certainly be dated to the turn of the fourth and third millennia BC. The characteristic wooden construction and the narrow shape of the pit confirm this chronology. Graves with the deceased placed in an extended position have similar features as, for example, in Tiszavasvári–Deákhalom.⁸ Considering this analogy, grave 2 from Šajkaš, Ciganska Humka, was included in the horizon of extended inhumations, chronologically overlapping with the Early Yamna phase.⁹ Radiocarbon dating of wood from grave 2 and animal bone samples from the barrow are similar and indicate the years around 3000–2900 BC (Table 1). In northern Banat, a good analogy to grave 2 from Šajkaš is grave 1 from Padej, Humka u Barnahatu. It was a primary burial, related to the oldest phase of the barrow. The pit had a characteristic narrow shape, with boards framing the bottom.¹⁰ The position of the deceased, partially disturbed post-deposition, was similar to the pattern applicable in the case of extended inhumations.

⁸ Horváth et al. 2013, 157, 160, fig. 5: 3, 4.

⁹ Włodarczak 2021b.

¹⁰ Girić 1987; see also Włodarczak 2021a, 226, fig. 5: 1.

Therefore, two graves presenting different funeral traditions were discovered in Ciganska Humka. Grave 2's form refers to the Pre-Yamna tradition (extended inhumations?), and grave 1 to the Late Yamna tradition.

Reconstruction of grave no. 1 from Medisova Humka in Žabalj

In 2017–2018, research was carried out on Medisova Humka (Fig. 7) in Žabalj, Žabalj municipality.¹¹ As with Šajkaš, it was a barrow built in two phases (Fig. 8). A small mound from the older phase was connected with grave no. 4. In a rectangular pit, incomplete remains of a man over 40 years old were found, placed without anatomical order (Fig. 9). Features characteristic for the Yamna culture in this case were: traces of wooden stakes driven into the bottom on the edges of the pit, the presence of a mat made of organic material at the bottom of the grave, and traces of ochre on the mat and the burial bones.



Fig. 7. Žabalj, Medisova Humka. Photo by P. Włodarczak.

¹¹ Jarosz et al. 2020; Jarosz et al. 2021.

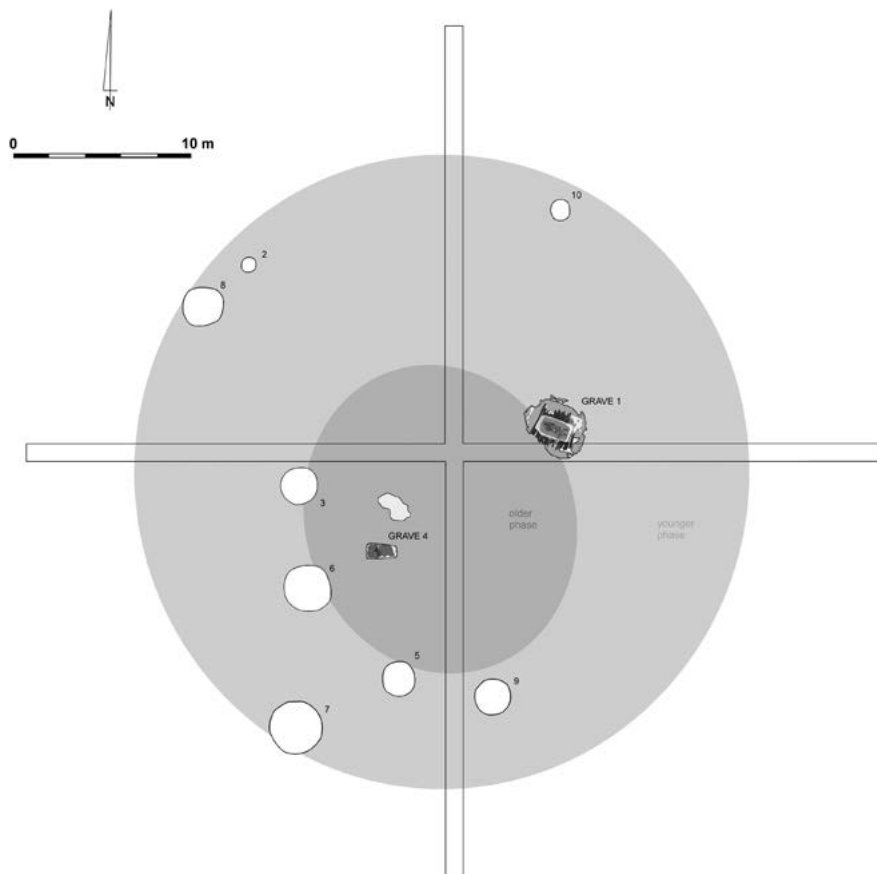


Fig. 8. Žabalj, Medisova Humka. Plan of the barrow. Acc. to Jarosz et al. 2021.

The younger barrow layer was associated with grave 1. In this object's case, the grave construction and burial arrangement features were well documented (Fig. 10 and 11). It was dug into the edge of the barrow associated with grave 4. The burial chamber, measuring 1.9 by 1.0 meters, had a rectangular shape and vertical walls. Its ceiling was covered with a solid roof, consisting of 23 boards arranged transversely, additionally covered with a mat made of organic material. The dimensions of the roof construction (approx. 3.6 x 2.9 m) were much larger than the dimensions of the burial chamber, as in the case of the barrow in Vojlovica.¹² The

¹² Jovanović 1974, 12.



Fig. 9. Źabalj, Medisova Humka. Grave 4. Photo by P. Włodarczak.

burial pit was 0.8 meters deep. The boundaries of the bottom were marked by a shallow groove 10–15 centimetres wide and 5–10 centimetres deep. Within it, 12 small stakes with a diameter of about 5 centimetres were placed symmetrically, similar to those in grave 4. A mat measuring 160 by 95 centimetres, made of an unspecified plant material, was spread on the surface, separated by the groove. The body of the deceased was placed on the mat, in a position typical of the late phase of the Yamna culture: on the back, with the left upper limb bent at the elbow, and the hand placed near the waist. The lower limbs are curled up with the knees facing up. Faint traces of ochre were preserved on the skull bones and in several places of the postcranial skeleton. Based on field documentation, an attempt was made to reconstruct the grave (Fig. 12). The burial bones were also used for pilot histological research to confirm the use of simple mummification (by drying–smoking the corpse) by Yamna culture communities.¹³ The conducted analysis suggests that the state of bone preservation could have resulted from the mummification of the corpse.

¹³ Majchrzak & Włodarczak 2021.



Fig. 10. Žabalj, Medisova Humka. Grave 1. Photo by M. Podsiadło.



Fig. 12. Žabalj, Medisova Humka. Reconstruction of grave 1 from Medisova Humka in Žabalj. By M. Podsiadło.

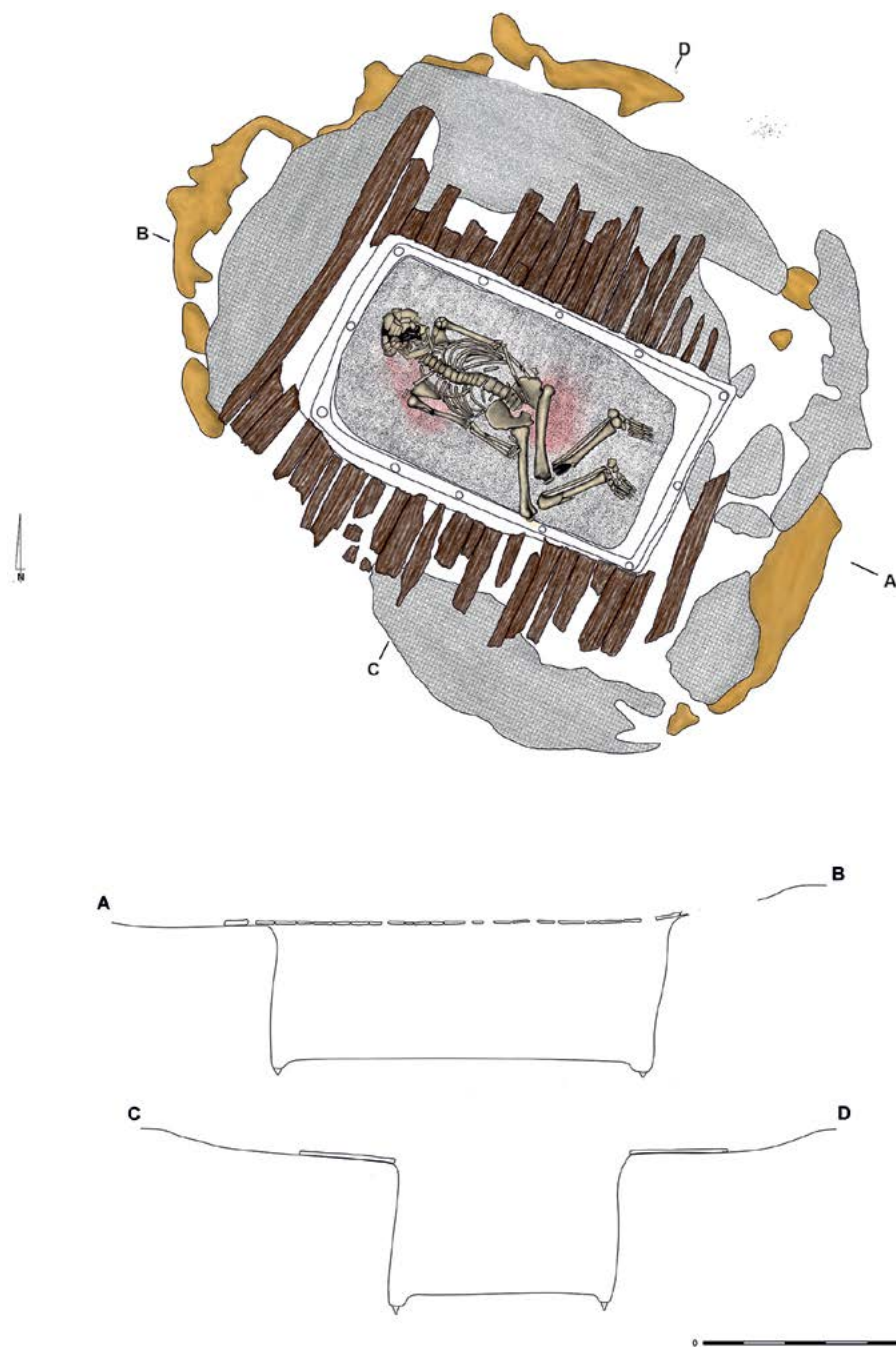


Fig. 11. Žabalj, Medisova Humka. Grave 1. Drawing by M. Podsiadło.

In contrast to the situation in Šajkaš, two burials representing a similar chronological phase were discovered in Medisova Humka in Žabalj. Burial types indicate a younger stage of the Yamna culture in the Pannonian plain. Similar graves were discovered in relatively nearby barrows in Perlez.¹⁴ Grave 1 from Medisova Humka in Žabalj is currently the best example showing the details of the barrow burial rite in this period.

Yamna, Pre-Yamna, and others...

In the territories of Bačka and the Serbian Banat, seventeen graves associated with the Yamna culture have been discovered so far (Jabuka, Tri Humke; Jaša Tomić, Velika Humka; Novi Kneževac, Japina Koliba; Padej, Humka u Barnahatu, graves 1 and 2; Pančevo–Livade, grave 80; Perlez–Batka C, Pašićeva Humka, graves 1 and 6; Perlez–Vuna, barrow 9, grave 1; Perlez–Vuna, barrow 10, grave 1; Šajkaš, Ciganska Humka, graves 1 and 2; Uljma, Itebejčeva Humka; Vlakovac, Straža; Vojlovica [nowadays: Pančevo], Rafinerija Naft; Žabalj, Medisova Humka, graves 1 and 4). Several other graves from barrows were not included in this list, for which no adequate data enabled taxonomic classification.¹⁵ Taking into account hundreds of burial mounds known from the Banat area,¹⁶ it is impossible to summarise the burial ritual of barrow communities in the fourth and third millennium BC based on such a small number of graves. It can be argued that these unexplored mounds contain burials different from those known regarding taxonomic and chronological features. At the same time, the presence of barrows dating back to the second half of the fourth millennium BC, associated with the Coţofeni–Baden circle, is particularly probable. In a later period (early third millennium BC), a funeral rite from the Vučedol circle can be expected, such as in the case of the burial mounds from Srem: in Batajnica and Vojka.

“Pre-Yamna Horizon” (fourth millennium BC) is a name for various trends in barrow rites preceding the expansion of the Yamna culture. Therefore, this term does not cover the initial stage of the culture; it is poorly known, and none of the examined burial mounds can be confidently included. In the northern part of Banat, the situations of Mokrin,

¹⁴ Vuna, barrows 9 and 10, and Batka C, Pašićeva Humka – Medović 1987.

¹⁵ Including graves from Mokrin, Arađanska Humka, or from Skorenovac, Grmušina Humka – see Włodarczak 2021, table 1.

¹⁶ Лазин 1989; Гирић 1994; Тасић 2006.

Arađanska Humka, and Srpski Krstur, Slatinska Humka, are interesting examples. In Mokrin, under a medium-sized mound (diameter 70 m, height 3 m), Baden culture urns and a skeletal burial – difficult to culturally determine – were discovered.¹⁷ The lack of traces of ochre and how the deceased was positioned (with the hands facing the face), known only from the description, speaks against linking it with the Yamna culture. A good analogy to it is only the unusual primary burial from Jabuka, Tri Humke.¹⁸ Therefore, assessing whether the cremation burials and the skeletal burial at Mokrin represent one or two chronological phases is difficult. The size of the barrow indicates that it was likely built in stages. Therefore, the situation at Arađanska Humka could have been similar to the sequences documented in the Romanian Banat: at Dudeștii Vechi, Bucova Pusta IV,¹⁹ and in Silvașu de Jos–Dealul Țapului.²⁰ Also in north-western Bulgaria, the Glavchovska Mogila of Tarnava shows a complex stratigraphic sequence in which older stages merge with the presence of cremation burials and pottery of the Coțofeni culture, but younger ones are related to the Yamna funeral type.²¹

It is possible that the oldest phase in Slatinska Humka in Srpski Krstur (northern Banat) also included cremation burials, as evidenced by the discovery of an amphora decorated with rope, along with burnt bone remains.²² This barrow has been only partially explored, so its stratigraphy has not been recognised at all. It can be assumed that it was built in several stages, and the discovered vessel represents the older or oldest phase (probably the turn of the fourth and third millennia BC).

Relation to barrows from neighbouring regions

The Yamna graves from Bačka and Serbian Banat come from burial mounds in the southern part of the Pannonian plain. Without ecological barriers, it is understandable that similar finds are documented in burial mounds from neighbouring Romania and Hungary. Similarly to Vojvodina, a sufficient number of burial mounds have not been examined in

¹⁷ Girić 1987, 71, 72.

¹⁸ Bukvić 1978, 17.

¹⁹ Krauß et al. 2016, 298–301.

²⁰ Diaconescu 2020.

²¹ Николов 1976; Alexandrov 2019.

²² Надлачки 1950.

these areas, making it impossible to assess their chronological and taxonomic diversity. The grave from the Bucova Pusta IV barrow in Dudeştii Vechi in Romanian Banat is analogous to the burials from Vojvodina.²³ Its characteristic feature is a wooden structure at the bottom of the pit, similar to the graves from Padej, Perlez, and Šajkaš. Analogous constructions are also documented in southern Hungary, for example in Szentes–Besenyőrhalm,²⁴ or in Kétegyháza–Kétegyházi Tanyák.²⁵ Also, types of body positions in the late phase from the area of Hungary show similar patterns to the graves from Vojvodina.²⁶

In eastern Hungary, graves associated with the early phase of the Yamna culture have been discovered, for instance in the famous Török-halom from Kétegyháza.²⁷ No similar finds have been found in the area of Vojvodina so far (only the above-mentioned graves related to the extended inhumations tradition date back to the Early Yamna phase). This does not mean their actual absence, but is probably due to the small number of barrows examined. It is difficult to treat the area discussed here as an enclave closed to the expansion of steppe communities at the turn of the fourth and third millennia BC.

Generally, the Yamna culture burials from the burial mounds in Bačka and Banat show supra-regional features – characteristic of the entire zone of the western expansion of the Yamna culture.²⁸ No traces of the influence of local cultural traditions, especially the Vučedol culture, have been documented so far. Therefore, an intriguing case is the discovery of two burial mounds from Srem (Batajnica, Velika Humka, and Vojka, Humka kod Velikog Begeja), in which the funerary traditions of the Vučedol and Yamna cultures intertwine.²⁹ In this matter, the concept of a special–strategic function of the Danube as an artery for the settlement of the Vučedol culture is intriguing.³⁰ Perhaps for this reason, syncretism is observed in the burial mound rite from this zone, with marked influences of the rituals of the post-Baden/Vučedol circle.

²³ Krauß et al. 2016.

²⁴ Hegedűs 1978, 34, Abb. 80.

²⁵ Ecsedy 1979, 22, fig. 10.

²⁶ Dani 2011, 45, fig. 3: 1, 3; Ecsedy 1979, 33, fig. 25.

²⁷ Ecsedy 1979.

²⁸ Heyd 2011; Kaiser 2019.

²⁹ Спасић 2016.

³⁰ Tasić 2003–2004.

Absolute chronology

The absolute age of the barrows in Vojvodina has long been determined by a single ^{14}C date for grave 2 from Humka u Barnahatu in Padej, in northern Banat.³¹ Recently, the list was expanded by thirteen new radio-carbon dates for seven burial mounds.³² All results point to the first half of the third millennium BC, and are associated with the early and classical/late phases of the Yamna culture. The dates for grave 2 from Padej and grave 2 from Šajkaš refer to the older stage (including dates for animal bones from the layers of the barrow associated with this burial). The primary grave from the barrow in Vojlovica, Rafinerija Nafte, is dated to the turn between the early and late phases – approximately 2900 BC (Fig. 13). All other absolute age determinations refer to the late phase, which is consistent with the typological dating of the features of the funeral rite.³³

The results are unlikely to provide a complete timeframe for burial mound communities in Vojvodina. As highlighted above, the very origins of many barrow cemeteries should be associated with Baden–Cotofeni communities from the late fourth millennium BC. There are also burials associated with the steppe trend, dating back to the second half of the fourth millennium BC. This trend is signalled by the graves from Padej (no. 1) and Šajkaš (no. 2), dating back to the beginning of the third millennium BC. The possibility of earlier dating of barrows with extended inhumations is indicated by the ^{14}C date for the primary grave from the barrow in Aliman in Dobruja,³⁴ as well as interpretations of the chronological position of this cultural phenomenon in the north Pontic Zone,³⁵ and in Bulgaria.³⁶

³¹ Girić 1987, 73.

³² Table 1; Włodarczak 2021a.

³³ Włodarczak 2021a.

³⁴ Ștefan et al. 2023, 106, table 2.

³⁵ Post-Mariupol, or Kvityanna type; e. g., Манзура 2010; Рассамакін 2013.

³⁶ Alexandrov 2010.

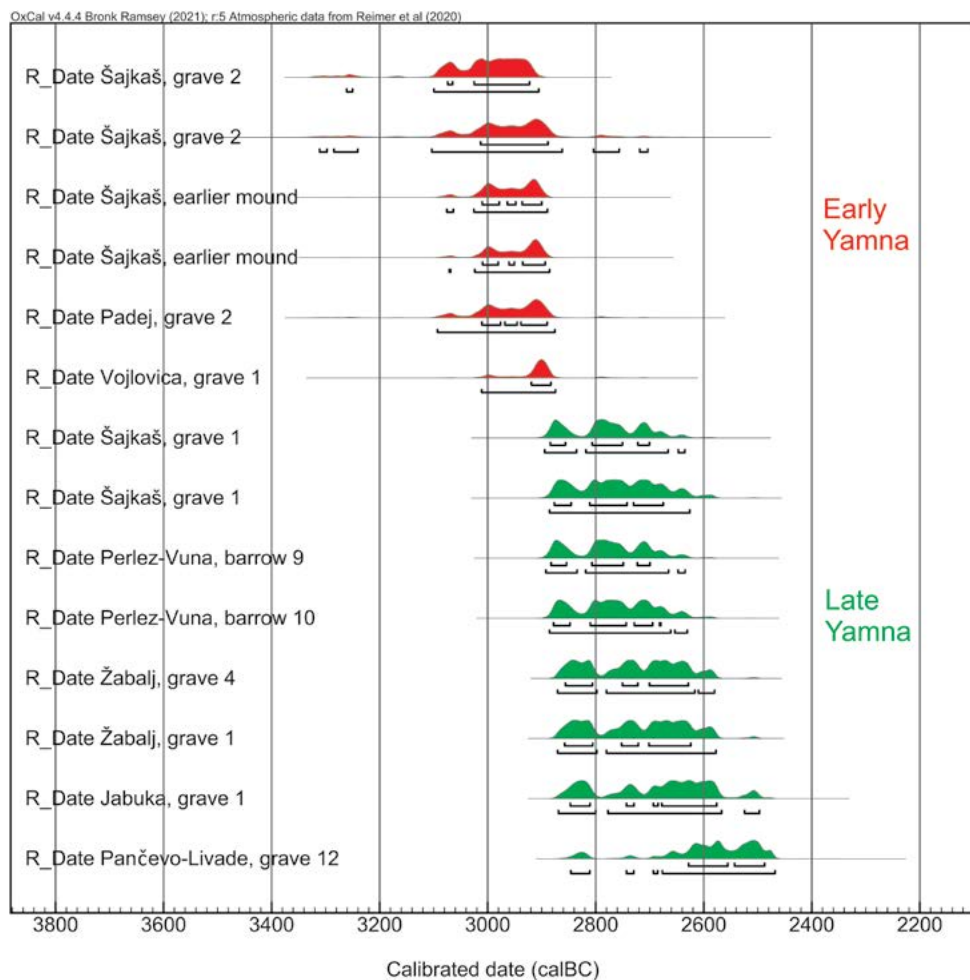


Fig. 13. Radiocarbon datings of barrows from Bačka and Serbian Banat.

Table 1. List of ^{14}C dates obtained for the barrows from Bačka and Serbian Banat

No.	Site	Feature No.	Dated material	Lab. no.	Age ^{14}C BP	Calendar age BC (68.2%)*
1	Padej, Humka u Barnahatu	2	wood	Bln-2219	4320 ± 50	3011–2891
2	Jabuka, Tri Humke	1	human bone	Poz-93213	4100 ± 40	2848–2577
3	Pančevo–Livade, grave 80	12	human bone	Poz-81208	4050 ± 40	2629–2488
4	Perlez–Vuna, barrow 9	1	human bone	Poz-114161	4190 ± 35	2883–2700
5	Perlez–Vuna, barrow 10	3	human bone	Poz-114162	4175 ± 35	2879–2680
6	Šajkaš, Ciganska Humka	1	wood	Poz-88657	4170 ± 40	2877–2676
7	Šajkaš, Ciganska Humka	1	human bone	Poz-88664	4195 ± 35	2885–2701
8	Šajkaš, Ciganska Humka	2	wood	Poz-88659	4320 ± 60	3014–2889
9	Šajkaš, Ciganska Humka	2	wood	Poz-93936	4385 ± 35	3075–2923
10	Šajkaš, Ciganska Humka	-	animal bone	Poz-114159	4335 ± 35	3011–2901
11	Šajkaš, Ciganska Humka	-	animal bone	Poz-114160	4325 ± 35	3010–2894
12	Vojlovica, Rafinerija Nafte	1	human bone	Poz-88701	4290 ± 35	2920–2884
13	Žabalj, Medisova Humka	1	human bone	Poz-100501	4125 ± 35	2858–2625
14	Žabalj, Medisova Humka	4	human bone	Poz-100500	4130 ± 30	2857–2629

* OxCal calibration program v4.4.4 (Bronk Ramsey 2021)

Conclusions

Excavations carried out in 2016–2018 in Šajkaš and Žabalj confirmed the assumptions regarding the taxonomic and chronological position of the burial mounds on the right bank of the Tisza river in Bačka.³⁷ Most of them are graves associated with allochthonous, Eastern European communities. It turned out that medium-sized burial mounds are usually multi-phase tombs. The phases of the barrow superstructure were associated with Yamna culture communities that enlarged tombs from an earlier period or repeatedly used their tumuli.

The graves from Bačka are analogous to graves from the Serbian Banat, the Romanian Banat, and southern Hungary. However, they differ from the barrow graves from Srem. It is difficult to determine whether the two burial mounds examined there (Batajnica and Vojka) represent the burial rite on the southern side of the Danube. The characteristics of the natural environment in Srem suggest that steppe communities of allochthonous, Eastern European origin could have also inhabited it.

Chronometric data indicate that most barrows were built in the first half of the third millennium BC. However, considering finds from other regions of the Danube–Tisza expansion of steppe communities, it can be assumed that the first barrow communities appeared in Vojvodina as early as the fourth millennium BC. The earliest barrow horizon is indicated only by single, poorly documented finds (Mokrin, Srpski Krsstur).

³⁷ Medović 1998.

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Jovan Koledin*

Museum of Vojvodina

Novi Sad, Serbia

Beška–Most, Between Vinkovci and Vatin

Contributions to the Understanding of the Pančevo–Donja Varoš Type

Abstract: This paper examines the contents of a pit discovered in 2007 at the Beška (Kalakača)–Most site. An area of approximately 350 m² was excavated, and only a single feature was attributed to the Early Bronze Age – a refuse pit. Through typological analysis of the pottery recovered from the pit, we sought to determine the chronological and cultural context of this material. Four reconstructed vessels show the greatest similarity to ceramics from the Pančevo–Donja Varoš/Fire Station site. Amphorae with flat plastic ribbing above the shoulder have been identified as belonging to the Beška type. In the Danube region, such material has been documented in closed assemblages at only these two sites. The Donja Varoš horizon still draws on the Late Vučedol (Vinkovci–Makó) tradition, most clearly evidenced by bowls decorated on the interior and the presence of barbotine on storage vessels. The predominance of Beška-type amphorae represents an innovation and indicates the beginning of the formation of a new culture. Typical forms of the Post-Vučedol horizon – thick-rimmed bowls, pitchers, and flask-shaped vessels – disappear. This new cultural phenomenon was designated by N. Tasić as the Pančevo–Donja Varoš horizon, and the amphorae as the Donja Varoš type.

Key words: Early Bronze Age, Pančevo–Donja Varoš (Najeva) brickyard, Beška–Kalakača–Most, Beška-type amphorae, Proto-Vatin culture, Vinkovci culture, Makó culture

The Museum of Vojvodina houses the archaeological material from rescue excavations conducted at the Beška (Kalakača)–Most site. The excavations, carried out in 2007, were directed by Dragan Anđelić of the Provincial Institute for the Protection of Cultural Monuments. The

* jok.koledin3@gmail.com

site is situated on a loess terrace beneath the elevated loess plateau of Kalakača.¹ A surface of approximately 350 m² was explored through trial trenching.²

This paper focuses on the contents of a single feature designated in the field inventory as Beška Kalakača–Most 2007, Trench 6, Feature 3. Excavation of Feature 3 in Trench 6 was conducted from the 5th to the 8th of March, 2007. The relative depth of the feature is 0.75 m. Its dimensions at the top of the ellipsoidal profile are 1.95 m by 1.6 m, and at the bottom, 2.2 m by 1.72 m.³

The pit yielded five reconstructed vessels, one bowl prepared for reconstruction, and several typologically distinct fragments from various other vessels.



Fig. 1. Beška, Kalakača–Most (Jevtić 2011, Fig. 49).

¹ Jevtić 2011, Figs. 32–32a; Fig. 49.

² *Ibid.* 36.

³ Field Diary of the Beška–Kalakača–Most site, 21, 23–25.

A portion of the ceramic material was published in the exhibition catalogue *Guardians of Grain in Prehistory – A Study on Grain Pits from Kalakača near Beška*.⁴

“...Particularly noteworthy as a group find is the Early Bronze Age pottery (five small, undecorated goblets, vessels decorated with dense net-like motifs, and similar items), which most likely belongs to the Late Nagyrév or Early Vátya culture of the Early Bronze Age in Hungary.”⁵

The largest vessel was heavily damaged but could nevertheless be reconstructed. Two ribbon handles were restored, while the rim was approximately reconstructed (Fig. 2, Pl. I, 1). The amphora is biconical, with a burnished surface. At the height of the handle base, there is a wide plastic strip that separates the neck from the shoulder. At the centre of the vessel, on the upper edge of the strip, a raised decorative element in the shape of a large Greek letter lambda (Λ) is preserved.



Fig. 2.

⁴ The exhibition was organised in 2011 by the City Museum in Vršac and the Faculty of Philosophy in Belgrade; Jevtić 2011, cat. no. 93.

⁵ Jevtić 2011, 36.

The term *amphoriskos*, as used here, is considered the most appropriate for the typological analysis of this pottery. Some authors use the designation “two-handled goblets” (Ljuština), which implies the existence of goblets with one handle or none, a classification we find overly broad for a clearly defined type of vessel. An *amphoriskos* is a small vessel (a diminutive of *amphora*), always with two handles, featuring an elongated body and a narrower mouth than the vessel’s widest diameter (distinct from a *kantharos*, which has a low body and wide mouth). Given the varied descriptive terms cited in the literature for this ceramic form, we find it necessary to provide this typological clarification and to justify the use of the term *amphoriskos* in the present context.

The second-largest *amphoriskos* (Fig. 3, Pl. I, 2) is preserved to a greater extent. Its surface is burnished, ranging in colour from grey-brown to dark grey. The ribbon handles are flared at the rim and slightly elevated above it. At the level of the base, the handles transition into a pronounced plastic rib, which separates the neck from the rest of the vessel, forming a kind of reinforced shoulder located at the upper section of the biconical transition. The base is distinctly emphasised with a ring-shaped foot.



Fig. 3.

The third amphoriskos in this assemblage is somewhat smaller (Fig. 4, Pl. I, 3). Only half of the vessel is preserved, and the handles are missing. However, based on the position of the handle base and the preserved section of the rim, it is evident that it belongs to the same type. The body is biconical, featuring a plastic, bevelled rib at the level of the handle base. The junction between the handle and the rim is flat and unaccentuated. The base is flat. A similar amphoriskos from the Pančevo–Donja Varoš site has been classified by S. Grčki-Stanimirov as belonging to the Pitvaros type.⁶



Fig. 4.

The fourth amphoriskos (Fig. 5, Pl. I, 4) is well preserved and exhibits all the characteristic features of the preceding examples: a biconical body, a tall neck, and a pronounced plastic rib at the level of the handle base. At the junction with the rim, the handle is slightly rounded. The base is unaccentuated.

⁶ Grčki-Stanimirov 1996, 73; Pl. I, 3.



Fig. 5.

The fifth vessel, with a conical body and a pronounced ring base (Fig. 6, Pl. I, 5), is typologically distinct. It is rather coarsely made and only superficially smoothed. One small ribbon handle is preserved, while the other has been reconstructed.

Several fragmented vessels that could not be reconstructed were also included in the field inventory. The lower part of a deep bowl with an everted rim (Pl. IV, 1) may correspond to a “burnished, black S-profiled pot with tunnel handles on a short neck”.⁷

A larger number of fragments of deep bowls with two vertical handles were also identified. The bodies are decorated with incised lines imitating combed and brush-like motifs (Fig. 7, Pl. IV, 2). Similar bowls have been found at the site of Szigetszentmiklós–Üdülő Sor near Budapest.⁸ This site was inhabited by members of the Csepel group, which belongs to the eastern sphere of the Bell Beaker cultural complex.

A review of the study material from this site yielded several fragmented vessels of particular relevance to our study:

– A fragment of a biconical belly (Pl. II, 3) features the usual narrow, flat strip above the shoulder. A new element is the appearance of an oval

⁷ Field Diary of the Beška–Most site, 23.

⁸ Endrődi 1992, Fig. 56, 1; Fig. 71, 5.



Fig. 6.

plastic knob (nipple) on the biconical shoulder itself. This feature is also present on amphoriskoi from Pančevo.⁹ In the following ceramic horizon (Pančevo–Omoljica), this feature becomes a dominant decorative element (along with the plastic strip) on the shoulders of amphoriskoi.¹⁰ It also appears on cups,¹¹ pots,¹² and bowls.¹³ The nipple itself becomes significantly more developed and is oriented downward.

– On fragments with thicker walls and temper inclusions, the surfaces were decorated using the barbotine technique and brush-like applications (Pl. III, 1; Pl. IV, 2).

– Another typical feature is the pronounced, projecting base rim of larger vessels. These characteristics are typical of storage vessels associated with the so-called post-Vučedol cultural groups.¹⁴

These traits – alongside the presence of bowls decorated on the interior – define the Donja Varoš type as part of the post-Vučedol horizon. The application of barbotine to the lower parts of vessels does not appear in the early Vatin culture. Consequently, the innovations of the Donja

⁹ Grčki-Stanimirov 1996, Pl. I, 5; Pl. II, 1, 4.

¹⁰ Радојчић 2013, cat. nos. 2, 7, 10–20, 95–98, 100–102, 104–123, 125.

¹¹ *Ibid.* cat. no. 149.

¹² *Ibid.* cat. nos. 40, 129.

¹³ *Ibid.* cat. no. 155.

¹⁴ Koledin 2008a, 68, Pl. XXXIII, 1; Pls. LXXX–LXXXI, 1–3.

Varoš horizon in ceramics are primarily reflected in the strong presence of amphoriskoi and the absence of certain finer ceramic types (pitchers, goblets, flask-like vessels) that have previously characterised the Early Bronze Age (Vinkovci culture) in Srem.

We may agree with N. Tasić's observation that "post-Vučedol cultures... chronologically belong to the Early Bronze Age, although their material culture still remains firmly tied to the Eneolithic tradition".¹⁵

The field diary notes the presence of animal bone fragments (some burned), shells, pieces of daub, charred wood, unworked stones, and charcoal in the pit.¹⁶ These elements indicate that it was a refuse pit.

Given the low density of features (only one pit within a 350 m² excavated area), we may conclude that the settlement was neither long-lasting nor particularly intensive. It likely represents a short-term occupation over a relatively broad area, a trait characteristic of Vinkovci settlements. For example, at the Bosut Gradina near Batrovci, three pits were discovered in a 300 m² excavation area, with no evidence of above-ground structures.¹⁷



Fig. 7.

¹⁵ Tasić 1983, 40.

¹⁶ Field Diary, 23–24.

¹⁷ Tasić 1983, 46.

Pančevo–Beška Type Amphoriskoi

Shared characteristics:

- Low lower body and tall, concave neck
- Two ribbon handles, beginning at the rim, with their bases positioned above the biconical shoulder
- Absence of decoration; surface is burnished
- Reinforcement of the neck base with a plastic strip (“cylindrical ring”)

The most closely comparable ceramic material is found at the Donja Varoš site in Pančevo, previously known as Vatrogasni dom (“Fire Station”). The excavation report from this site, dated to 1982, includes two photographs. The two amphoriskoi in the foreground undoubtedly belong to the Beška type. The vessel in the background exhibits traits characteristic of the Pančevo–Omoljica group.¹⁸

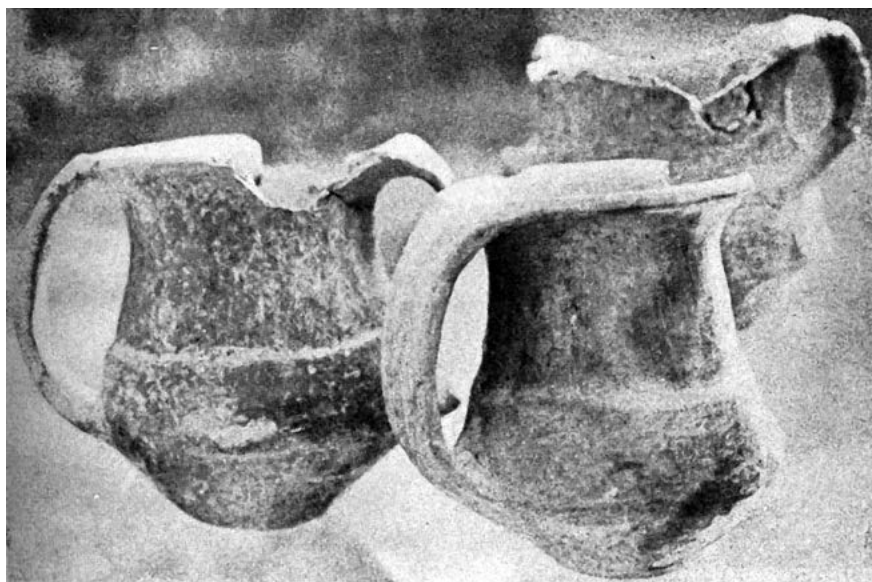


Fig. 8. Pančevo, Vatrogasni dom (Rašajski & Gačić 1985, T. VII, 2).

¹⁸ Rašajski & Gačić 1985, Pl. VII, 2. It is possible that these vessels appear in the work of S. Grčki-Stanimirov, although she does not explicitly mention them, Grčki-Stanimirov 1996.

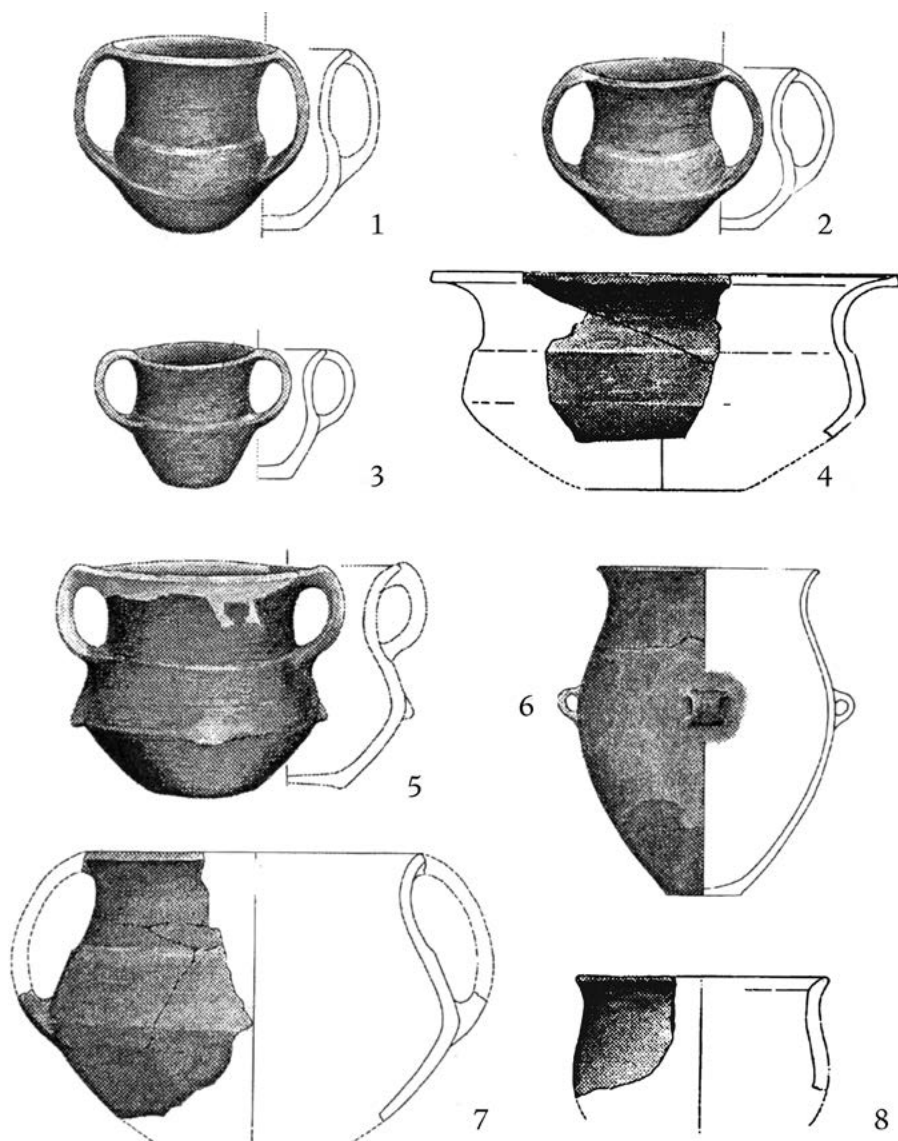


Fig. 9. Grčki-Stanimirov 1996, Pl. I.

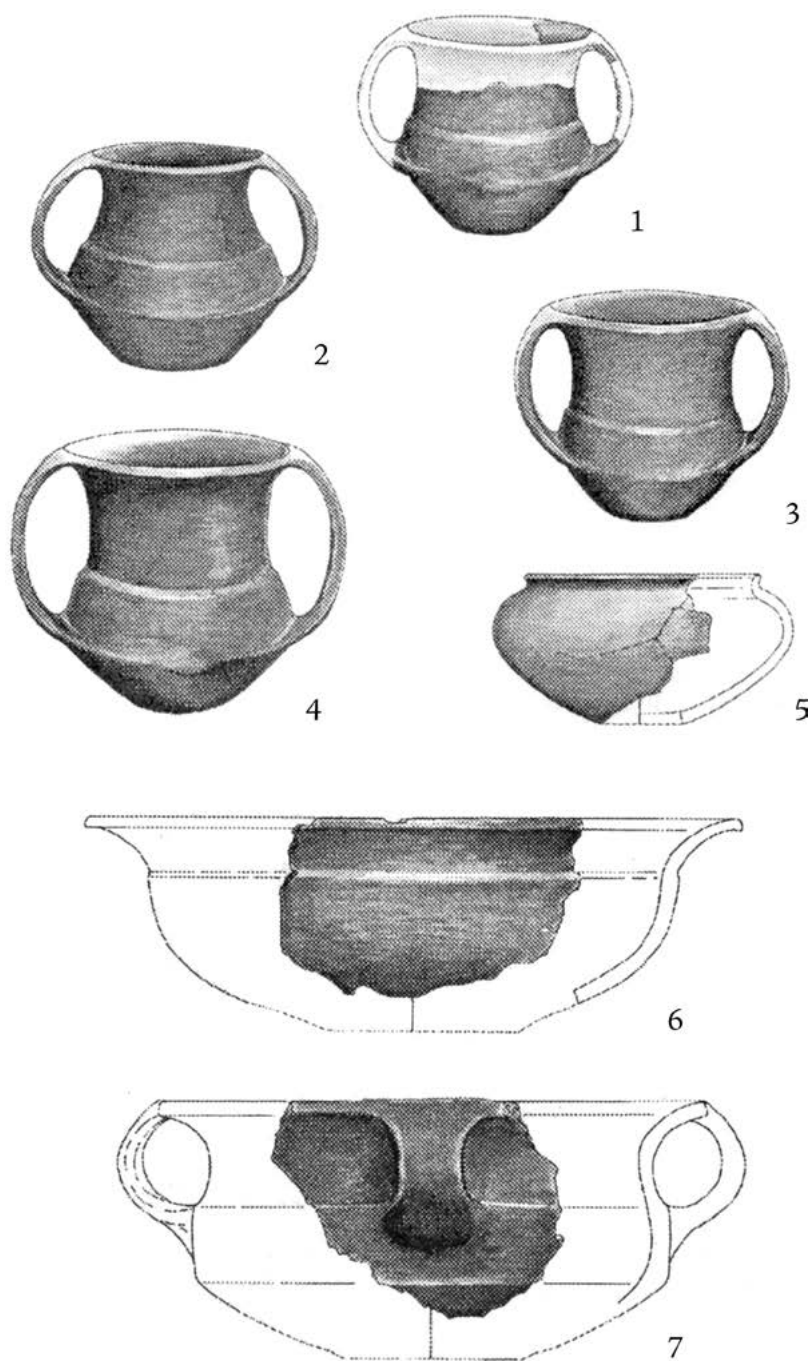


Fig. 10. Grčki-Stanimirov 1996, Pl. II.

Λ-Variant Amphoriskoi

This variant of amphoriskos features decoration executed through the plastic articulation of the cylindrical ring. The largest amphoriskos from Feature 3 belongs to this variant (Fig. 2, Pl. I, 1).

At Donja Varoš, a fragment bearing an identical lambda (Λ) motif to that on the amphoriskos from Beška has been identified (Fig. 11).

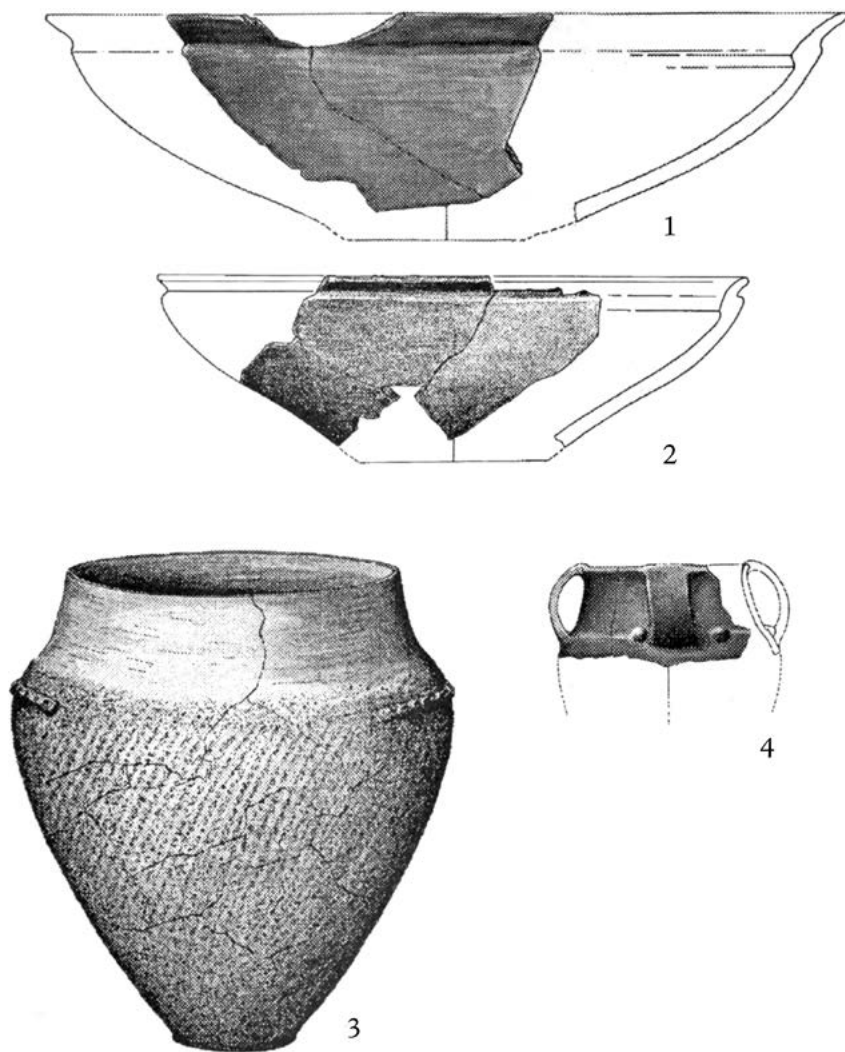


Fig. 11. Grčki-Stanimirov 1996, Pl. III.

As an analogy, Grčki-Stanimirov cites fragments from the site of Vecina Mala.¹⁹ At Vecina Mala these are fragments with plastically formed ribs, but of a form entirely different from those found in our assemblage, and the decorations are not associated with the broad flattened ring above the neck base – meaning that the decorated fragments do not belong to amphoriskoi. They most closely resemble amphora fragments such as those from Donja Varoš.²⁰

Narrow plastic decorative bands on vessels, as a direct influence of the Csepel group of the Bell Beaker complex (KZP), are found at the Petrovaradin Fortress.²¹ Plastic decorations in the form of the Greek letter lambda (Λ) are also frequent in the Csepel group.²² Likewise, the delta (Δ) motif appears, as a combination of a plastic Λ ornament above a horizontal decorative band.²³

The earlier phase of the Nagyrév culture adopts this decorative concept, with a prominently displayed Λ motif.²⁴ In the later phase of the culture, the plastic ornament above the horizontal band becomes smaller and most closely resembles the decorations on our vessels.²⁵

The neck is separated from the biconical transition by a broad (Pl. I, 1–2, 4) or narrower (Pl. I, 3) plastic band (“cylindrical ring”),²⁶ which emphasises this segment of the shoulder. This detail later reappears in developed form on Vatin amphoriskoi. The neck becomes slightly shorter, and the opening takes on an oval or rhomboid shape. The plastic band at the shoulder expands, assuming the role of the shoulder, and acquires new decorative elements.

The Pančevo–Donja Varoš / Beška–Most horizon directly follows upon the post-Vučedol cultural legacy. Larger vessels that may be classified as coarse ware exhibit all the characteristics of Vinkovci and Makó prototypes: barbotine applied to the lower parts of the body, a flat base with a pronounced ring-like extension (Pl. IV), and a horizontal plastic band below the rim with impressed fingertip marks (Pl. III). The Vučedol

¹⁹ Стојић 1986, Figs. 12–13, 23–24.

²⁰ Grčki-Stanimirov 1996, 73, Pl. IV, 3, 7.

²¹ Koledin 2008a, Pl. XXXVIII, 1–2; Pl. XL, 1–2; Pl. XLI, 1–2.

²² Schreiber-Kalicz 1984, Taf. XXXVI, 1; Taf. XXXVIII, 11.

²³ *Ibid.* Taf. XXXVIII, 7; Taf. XXXIX, 9.

²⁴ *Ibid.* Taf. XLIII, 4; Taf. XLIV, 1.

²⁵ *Ibid.* Taf. XLV, 14.

²⁶ Богдановић 1986, 60, fig. 37.

cultural legacy is also reflected in the find of a bowl decorated on the interior by incision from Donja Varoš. Based on a small fragment of the rim and body, a graphic reconstruction was produced,²⁷ depicting a bowl on a tall conical foot (Fig. 12). The bowl comes from a pit that contained

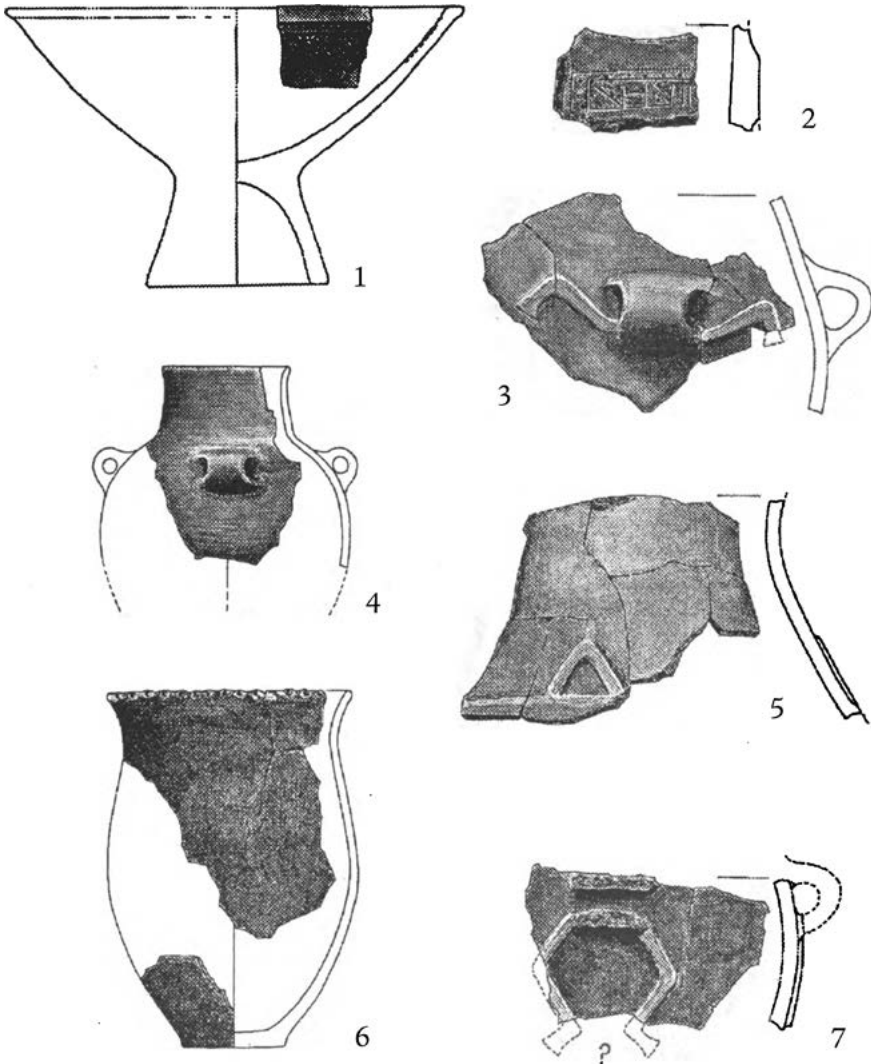


Fig. 12. Grčki-Stanimirov 1996, Pl. IV.

²⁷ Grčki-Stanimirov 1996, Pl. IV, 1.

exclusively material from the Vinkovci–Somogyvár culture. The pit's depth corresponds to the floor level of Early Bronze Age houses.²⁸ The decorative motif is not typical of the core Vučedol cult circle, but most closely resembles motifs on bowls associated with the Bubanj–Hum III culture of the Central Balkans. A stemmed cup from the site of Pelince–Dve Mogili²⁹ bears the closest resemblance to our example. N. Tasić attributes the bowl, decorated on the interior with post-Vučedol elements, to the Makó group.³⁰

S. Grčki-Stanimirov does not mention the stemmed bowl (Fig. 13), which appears – without explanation in the text – in the report by Rašajski and Gačić.³¹ The bowl exhibits elements of a late developmental phase that begins with the Sotin type and evolves within the Csepel group of the Bell Beaker complex,³² as well as in parts of the Makó (Ro-

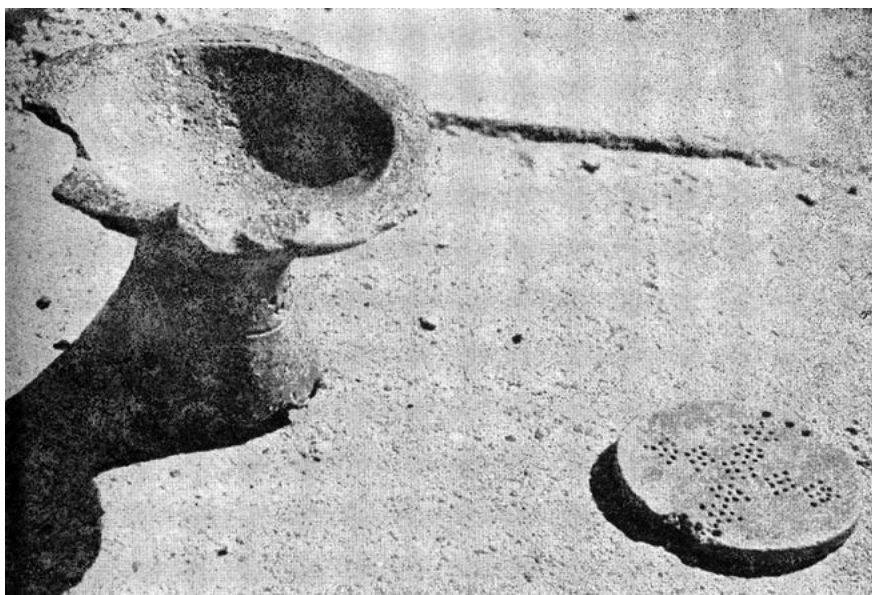


Fig. 13. Pančevo, Vatrogasni dom (Rašajski & Gačić 1985, T. VII, 1).

²⁸ Grčki-Stanimirov 1996, 73.

²⁹ Булатовић & Станковски 2012, 81, Pl. LVI, 50.

³⁰ Tasić 2003–2004, 27.

³¹ Rašajski & Gačić 1995, Pl. VII, 1.

³² Schreiber-Kalicz 1984, Taf. XXXIV, 5–6.

manian: Macău) culture's territory.³³ The decoration is applied on the exterior, interior, and along the extended, wide rim. The photograph does not reveal the presence of incised motifs on the interior surface of the vessel. The stem is decorated with incisions in the central zone.

The excavation report from the Vatrogasni dom site also mentions a grave containing the cremated remains of the deceased. However, the burial rite and ritual were not described in detail; the grave goods are listed only in summary – as “small amphorae with ribbon handles”.³⁴ This find has not yet been formally published.

L. Nikolova (relying on the material published up to that time) classifies the Pančevo–Donja Varoš type within the “two-handled goblet” horizon.³⁵ N. Tasić does not consider southern Banat to be a zone of Makó culture distribution. Instead, he identifies a distinct ceramic group in this region, whose origin he links to the Pit Grave (Yamnaya) culture and the late Coţofeni culture. Decoration featuring brush-like and stamp motifs, along with textile impressions, is attributed to a culture known by various names – Foeni, Gornea, Vodenac – contemporary with the Mokrin/Mureş culture. He sees goblets (such as those from Beška) as the leading form of the Pančevo–Donja Varoš horizon. Tasić defines this horizon as pre-Vatin and distinguishes it from the Pančevo–Omoljica group, considering the latter an outdated and imprecise term.³⁶ In a later work, he designates the finds from Donja Varoš as the pre-Vatin type of the Donja Varoš brickyard. These finds would push the beginning of the Early Bronze Age significantly earlier than previously assumed,³⁷ a view later adopted by M. Ljuština.³⁸

The amphoriskoi appear already in a fully formed and clearly defined style, without any transitional forms traceable within indigenous cultural developments. The interpretation of a native evolution of “two-handled goblets” from the Late Vinča period is, in our view, unfounded – primarily due to the lack of ceramic continuity throughout the Middle and Late Eneolithic. The Eneolithic cultures (Baden–Kostolac–Vuče-

³³ Kulcsár 2009, 132, Fig. 30.7.

³⁴ Rašajski & Gačić 1985, 15.

³⁵ Nikolova 1999, 233–234.

³⁶ Tasić 2003–2004, 26–27.

³⁷ Tasić 2006, 28.

³⁸ Љуштина 2022, 42, 67.

dol) do not feature amphoriskoi at all, as even Bogdanović acknowledges.³⁹ In this regard, Bogdanović reiterates an older hypothesis proposed by M. Grbić.⁴⁰

At the Pančevo site of Vatrogasni dom, house foundations containing new ceramics were constructed over pits filled with indigenous ceramic material. Given that the new ceramic typology cannot be derived from the local base, it is likely that we are dealing with direct influence (or possibly migration?) of Bujanj–Hum III culture bearers from the right bank of the Danube.⁴¹ In Srem, they arrived in areas previously inhabited by the Late Vinkovci culture, which had already undergone partial transformation due to the migration of Bell Beaker groups from the Upper Danube region.⁴² In southern Banat, the local population consisted of Late Makó culture bearers and the Gornea–Orlești group.

The Pančevo–Donja Varoš horizon has not been identified at the Židovar site near the village of Orešac. The Židovar I horizon, however, includes some vessel forms that may be associated with ceramics characteristic of the Donja Varoš horizon.⁴³ In this layer, M. Ljuština sees traces of both the Gornea–Orlești and Makó cultures.⁴⁴ The Židovar I horizon also contains early Vatin vessels,⁴⁵ although it is designated here as a pre-Vatin horizon.⁴⁶ Future excavations will likely yield a more nuanced subdivision of this horizon. On typical tells, such as Vinča–Belo Brdo and Gomolava near Hrtkovci, the Donja Varoš horizon is entirely absent. As such, a definitive answer regarding the substrate of the Vatin culture must await the results of future research.

More recent excavations at the Donja Varoš (Najeva) brickyard in 2003 and 2004 revealed that the earlier horizon of the prehistoric settlement comprised cellars, pits, and hearths. The material was stylistically classified as Pančevo–Omoljica.⁴⁷ A photograph of an amphoriskos⁴⁸

³⁹ Bogdanović 2012, 152.

⁴⁰ Грбић 1955, 19–21; Grbić 1957, 37.

⁴¹ Bulatović, Jovičić & Milovanović 2019, 69–71.

⁴² Koledin 2008b.

⁴³ Ljuština 2013, 100–102, Fig. 5, 5–8.

⁴⁴ Ljuština & Dmitrović, 40.

⁴⁵ Љуштина 2022, App. 30.

⁴⁶ *Ibid.* 99.

⁴⁷ Ђорђевић & Ђорђевић 2018, 8–9.

⁴⁸ *Ibid.* 9, cat. no. 28.

suggests that part of this material belongs to the earlier horizon defined by N. Tasić as Pančevo–Donja Varoš. M. Ljuština places this material (Pančevo–Vatrogasni dom horizon) in the Early Bronze Age Banat IIb–III phase, following F. Gogâltan’s 1996 periodisation. However, in his revised 1997 system, Gogâltan presents this horizon as Phase I of the Middle Bronze Age. In Phase IIb, ceramics with strong southern influences appear – what Gogâltan calls the Vecina–Bubanj III–Armenochori horizon. He cites I. Bóna’s view regarding the incursion of Pitvaros culture from the Morava valley in connection with the Bubanj–Hum III culture.⁴⁹ The absolute dating remains between 2100 and 1900 BCE.⁵⁰

According to Marian Gumă, material from the Donja Varoš brickyard served to define his horizon of finds of the Sânpetru German–Pančevo type, which he assigns to the second stage of the Early Bronze Age (BT IIa). Gumă identifies two graves from Sânpetru German as parallels to the finds from Pančevo–Donja Varoš, equating them with Ljuljaci I, Bubanj–Hum III, and Vinkovci-type finds. In Donja Varoš, he recognises both Makó and Nyírség (Nir) material. He emphasises the stratigraphy of the settlement at Corbului Island (Ostrovul Corbului), where a brief Vecina–Bubanj–Hum III horizon is overlain by the Gornea–Orlești horizon.⁵¹ Gogâltan classifies finds of the Sânpetru German–Pančevo type as belonging to the Early Bronze Age in Banat and places the Vatin culture in the Middle Bronze Age, in the first half of the second millennium BCE.⁵² At the Uivar–Gomila site, radiocarbon (C14) analyses of a closed context associated with the Makó culture produced dates between 2565 and 2306 cal. BC. This places the Sânpetru German–Pančevo type between the late phase of the Makó and the early Mureș culture.⁵³

The amphoriskoi from Pančevo and Beška are somewhat similar to those of the Pitvaros–Mokrin culture. Apart from a somewhat stockier form, the Beška/Donja Varoš type is especially distinguished by the specific plastic band above the shoulder. Interestingly, an incised Λ motif appears on an amphoriskos from Grave 5 of the Mokrin necropolis, located in the same position as on the Beška-type amphoriskoi.⁵⁴

⁴⁹ Gogâltan 1999, 381–382.

⁵⁰ *Ibid.* 314, Fig. 1.

⁵¹ Gumă 1997, 100–101.

⁵² Gogâltan 2004, 133.

⁵³ Woidich 2009, 359.

⁵⁴ Girić 1971, Pl. II, 6.

From the Beška–Most site, we have material from only a single refuse pit. We still lack settlement features that would reveal the household, settlement layout, and economy of the new communities in the Danube region. Certainly, the spirit of cultural change was not expressed solely in the appearance of new vessel forms. These new vessel types cannot be typologically linked to the indigenous tradition of the Early Bronze Age in Vojvodina. A much clearer indicator of the end of the Early Bronze Age and the break with the Eneolithic tradition is the complete disappearance of stemmed bowls/cups decorated on the interior. The conclusion of the Early Bronze Age (i.e., the post-Vučedol complex) also marks the end of the Pančevo–Donja Varoš horizon.

The find from Beška indicates that this cultural phenomenon was present not only in southern Banat but also in Srem, the central area of the Vinkovci culture. The influence from the south-east was evidently very strong. It reshaped all the late Eneolithic cultures it encountered in the Danube region, leaving no material traces in the newly formed Middle Bronze Age cultures of the area. The Vatin culture, which follows the Early Bronze Age both stratigraphically and chronologically, is entirely based on new ceramic styles and new spiritual values. The Pančevo–Donja Varoš / Beška–Most horizon represents the very inception of the cultural currents that would bring about this transformation. By identifying this horizon, N. Tasić took the first step toward defining the foundations from which early Vatin culture would develop.

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Stefan Alexandrov*

Georgi Ivanov

Tanya Hristova

National Archaeological Institute with Museum

Bulgarian Academy of Sciences

Sofia, Bulgaria

Middle Bronze Age Necropolis Near Baley, North-West Bulgaria

Abstract: In the article, thirty-two Middle Bronze Age cremation graves, containing thirty-four urns from the Bronze Age necropolis near Baley, north-west Bulgaria are discussed. All the Middle Bronze Age graves but one contained one urn only, usually an amphora-like vessel being used as a “container” for the bones. The grave inventory is relatively sparse, around 12% of the graves presenting grave goods – three bronze ornaments, a clay cup as well as one stone, and bone pendant. Based on the analyses of the pottery and bronze ornaments, the chronological position of the graves discussed is set in the first half of the second millennium BC. An AMS date from feature no. 160 secures the grave’s position in the 19th–18th century cal. BC. The necropolis is related to the early phases of the Verbicioara phenomenon. The problems of the investigations of Middle Bronze Age Verbicioara mortuary practices and the cultural affiliations in the region of north-west Bulgaria during the first half of the second millennium BC are discussed as well.

Key words: Middle Bronze Age, Mortuary practices, Lower and Middle Danube, Verbicioara, Vatin

The second millennium BC archaeological complex (settlement and necropolis) near the present-day village of Baley (Vidin district, north-west Bulgaria) is located in the western part of the Lower Danube region. It is situated on a non-flooded sand dune at the right bank of the Timok river, approximately two kilometres south of its confluence with the Danube. The archaeological excavations of the Late Bronze Age

* stefanalexandrov@abv.bg

(LBA)¹ settlement lasted 18 seasons (from 1970 to 1989), remaining generally unpublished (Pl. 1.1). The necropolis, located approximately 500 m south-east of the settlement, was discovered in 2009, with the archaeological investigations continuing from 2010 onwards (Pl. 1.2). The main results of the archaeological excavations in Baley are as follows:

The Late Bronze Age settlement

A total area of 4100 m² was excavated in 1970–1989 by a team led by R. Katincharov (NAIM-Sofia), and A. Iotsova (RHM-Vidin). The settlement had four main successive building levels: IVb/IVa, related to the LBA-1 period; III-Ib, related to the LBA-2 period; level Ia, related to the LBA-3 period/transition to EIA. The LBA archaeological materials from those levels are related to what is known as “Encrusted Pottery Culture”, “Bistret”, and “Vârtop” Groups/Cultures, respectively, showing a gradual transition from an “incised and encrusted” pottery style to the so-called “channeled pottery” style. Stratigraphically, several Early Iron Age pits (related to the “Basarabi” phenomenon) cut the LBA levels.²

The second millennium BC necropolis

The location of the necropolis was discovered in 2009. Since 2010 more than 1200 m² have been excavated, with 164 graves and features related to mortuary practices investigated so far. Over the entire excavated area, the recorded ritual is cremation outside the boundaries of the necropolis, the burnt bones being placed in clay vessels used as urns/containers. The graves discovered are single, double, triple, and multiple. According to the archaeological materials discovered and the radiocarbon dates obtained, four chronological groups in the necropolis could be distinguished: first half of the second millennium BC – group 1, related to the Middle Bronze Age (MBA); 15th century BC – group 2, related to the LBA-1 period;

¹ The chronological division used here follows the periodisation of the Bronze Age accepted in Bulgarian historiography (Alexandrov 2018).

² Alexandrov, Hristova & Ivanov 2012.

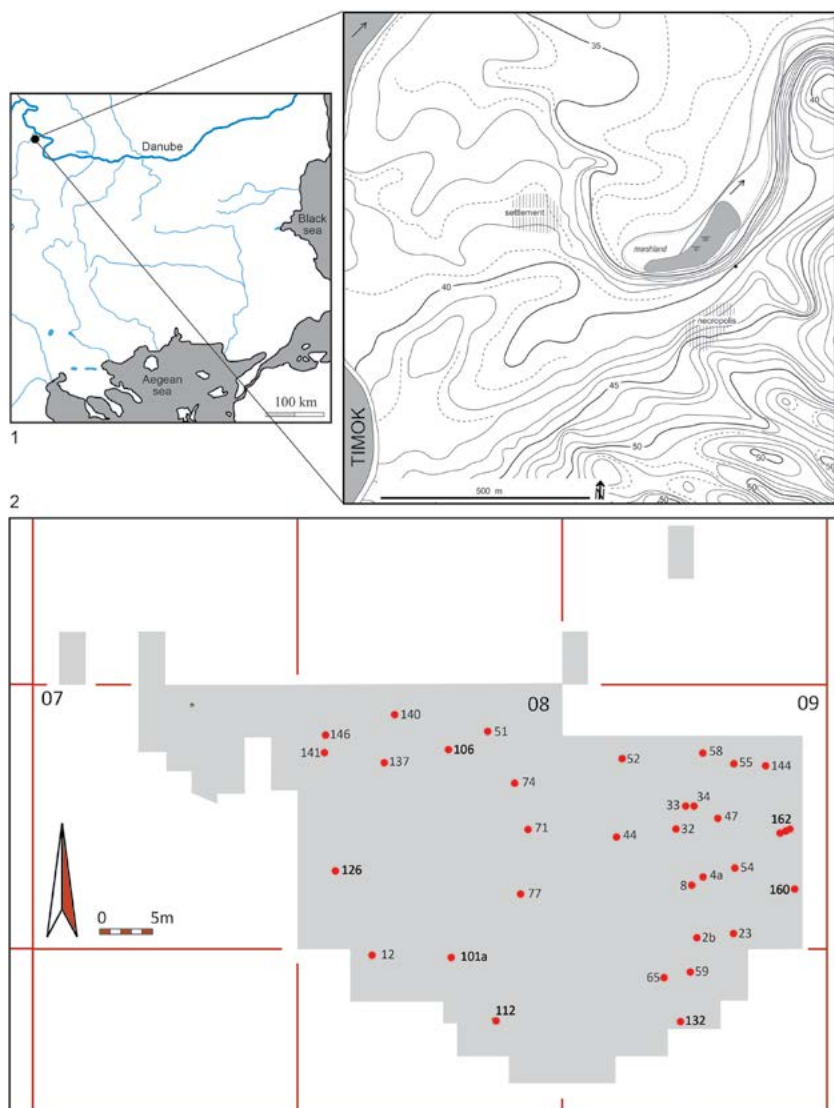


Plate 1.

14th–13th century BC – group 3, related to the LBA-2 period; and 12th–11th century BC – group 4, related to the LBA-3/transition to EIA period.³

³ Alexandrov, Ivanov & Hristova 2016; for anthropological analyses – Galabova & Atanassova-Timeva 2014.

The Middle Bronze Age graves

Thirty-two MBA features have been discovered so far, containing 34 urns (Pl. 1.2). Unfortunately, the integrity of most of the graves has been destroyed by later anthropogenic activities. In some cases, LBA graves destroyed earlier MBA ones (such as features 2a/2b, 4a/4b (pl. 2.1)) and 101a-d/101e), while in other modern anthropogenic works destroyed the upper part of the urns (Pl. 2.6). Generally, more than 50% of the MBA urns have been affected, only their bottom parts being preserved.

However, despite these impediments, certain general characteristics regarding MBA mortuary practices at Baley can be outlined. The necropolis, so far, covers an area of 60 m (east–west axis), by 30 m (north–south axis). It seems that the graves form two clusters – eastern and western, with 19 and 13 graves, and 21 and 11 graves in each one, respectively. The two clusters are divided by an “empty” space that forms a north–south path with a minimum length of 8.5 m. The density of the graves in the first cluster is higher, the 19 features being set in an area of approximately 170 m². The density in the western cluster is much lower, with the 13 features discovered in an area of approximately 600 m² (Pl. 1.2).

All the graves but one contained one urn only. According to the anthropological data available (17 urns analysed so far), burnt remains of only one person were placed in the urn. The ratio of adult individuals to children buried is approximately one to one. From all 34 urns discovered so far, 31 were big or middle-sized amphora-like vessels; the remaining three being a kantharos, a bowl, and a biconical vessel (of the so called “Hängegefäße”). Since most of the upper parts of the graves were destroyed, we cannot be quite confident about the covering of all the urns, but it seems that the bigger amphorae (with a height more than 30 cm) were not covered. We have secure data for the covering of eight urns only – four with middle sized stones, and four with bowls (Pl. 2.2; 3.2, 5; 5.5–6; 6.1–2). No relation between the type of urn and the age/sex of the buried individual has been established so far. The grave inventory is relatively sparse. Four of all 32 graves (around 12%) had inventory: a bronze crescent-shaped pendant (feature no. 52, Pl. 4.1–3), and two bronze hair-rings (feature no. 65, Pl. 5.2–4), placed in the urns; a cup near the urn of feature no. 58 (Pl. 5.9), and a stone and bone pendant in feature no. 54 urn (Pl. 6.3–4).

No necropolis–settlement relation has been established so far.



Plate 2.

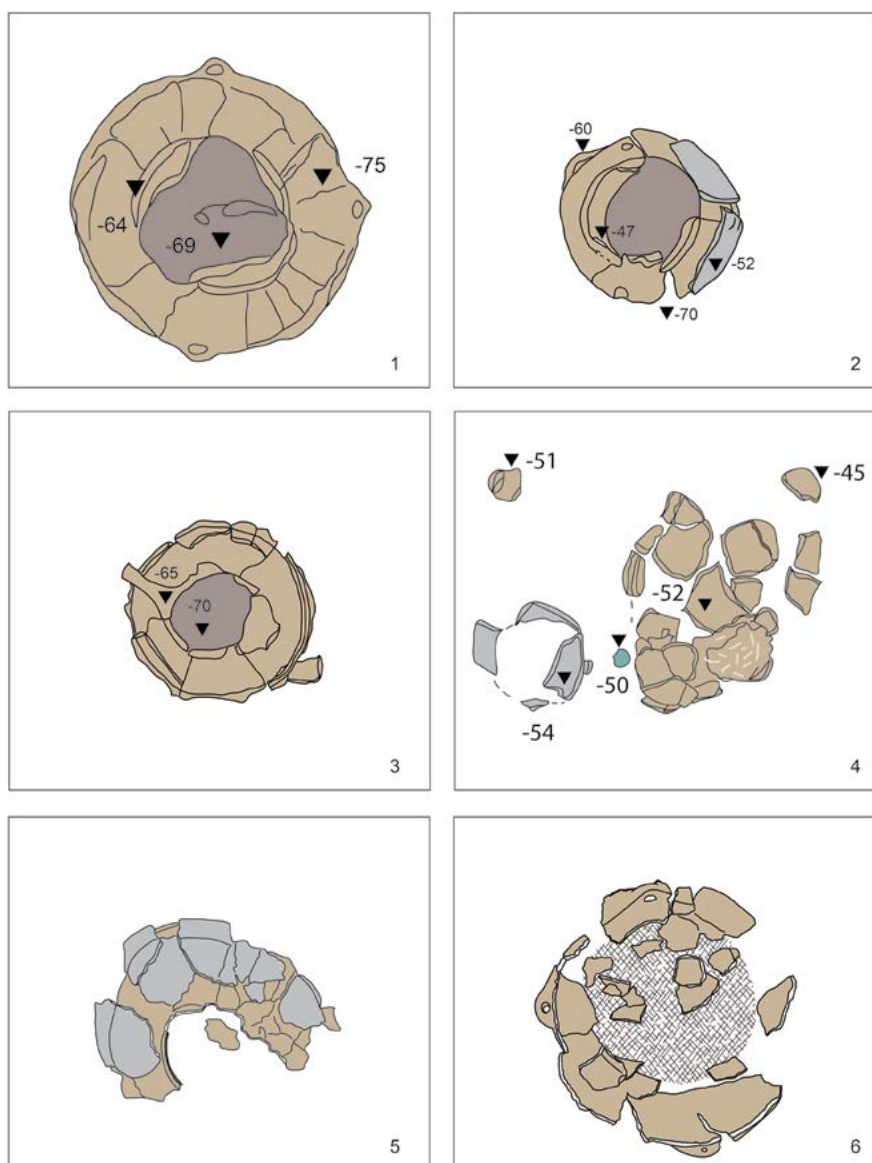


Plate 3.

Chronological framework of the MBA graves from Baley. The chronological position of the graves can be found using parallels of their inventory with well dated complexes mainly north-west of the region, as follows:

Metal finds. A total number of four bronze ornaments were found in the MBA necropolis so far. It is worth mentioning that three of them were found in graves of young individuals, both graves being located in the eastern sector of the necropolis:

Hair-rings. Two hair-rings were found in the urn of feature no. 65, alongside the cremated bones of an infant three to five years of age. They were made of a bronze bar with a triangular cross-section, thinned towards the ends. They are oval-shaped, the bar is spirally twisted in 1.5 turns, with one of the ends bent backwards into 0.5 turns. Their height is 4.5 and 3.9 cm, respectively (Pl. 5.3–4).

The nearest parallels come from a stray find from the village of Topolovets, Vidin region. It consists of three massive golden hair-rings similar in shape and dimensions to the Baley ones.⁴ In the Lower Danube region such hair-rings were integrated by E. Zaharia in her type “B”, variant “Brd”.⁵ However, during the Middle Bronze Age this type of hair-ring was much more common in the Carpathian and Central European regions. Without entering a profound discussion, we will mention here the finds from Satu Mare, Romania,⁶ and those from Badacsonytomaj, Zonta, Mezőberény, and Kengyel, Hungary.⁷ The find from Satu Mare has been dated by F. Gogăltan to the Middle Bronze Age III period, dated to the 1650–1500 BC time-span.⁸ In Tószeg, these hair-rings appear in the transition between stages “B” and “C”, being present until the mid-stage “C” at this location.⁹ According to I. Bóna, these stages correspond to the Hatvan and Füzesabony Cultures, dated to the MBA I–II periods, respectively.¹⁰ Further west, the hair-rings from grave 222 in Nižná Myšľa should be mentioned, dated to the Br.A2a period.¹¹ Similar golden hair-rings come from the Franzhausen I necropolis (Austria), these being dated to the Br. A1b–A2a period.¹²

⁴ Александров 2009, 10, Одр. 1/25–27.

⁵ Zaharia 1959, 115–116, Abb. 5/1, 4, 5.

⁶ Kacsó 1998.

⁷ Mozsolics 1967, Taf. 17/7,8; Mozsolics 1968, Taf. 18/2,3; Hänsel & Weihermann 2000 with a list of the finds for Carpathian and Middle Danube regions.

⁸ Gogăltan 1999, 78, 190, Fig. 46/8–14.

⁹ Bóna 1992a, 54.

¹⁰ Bóna 1992b, 109.

¹¹ David 2002, Taf. 245/2a–f.

¹² Neugebauer 1994, 21; Neugebauer-Maresch & Neugebauer 1989, 126–128; Taf. 1/5, 3/5, 5/7, 10/25–26.

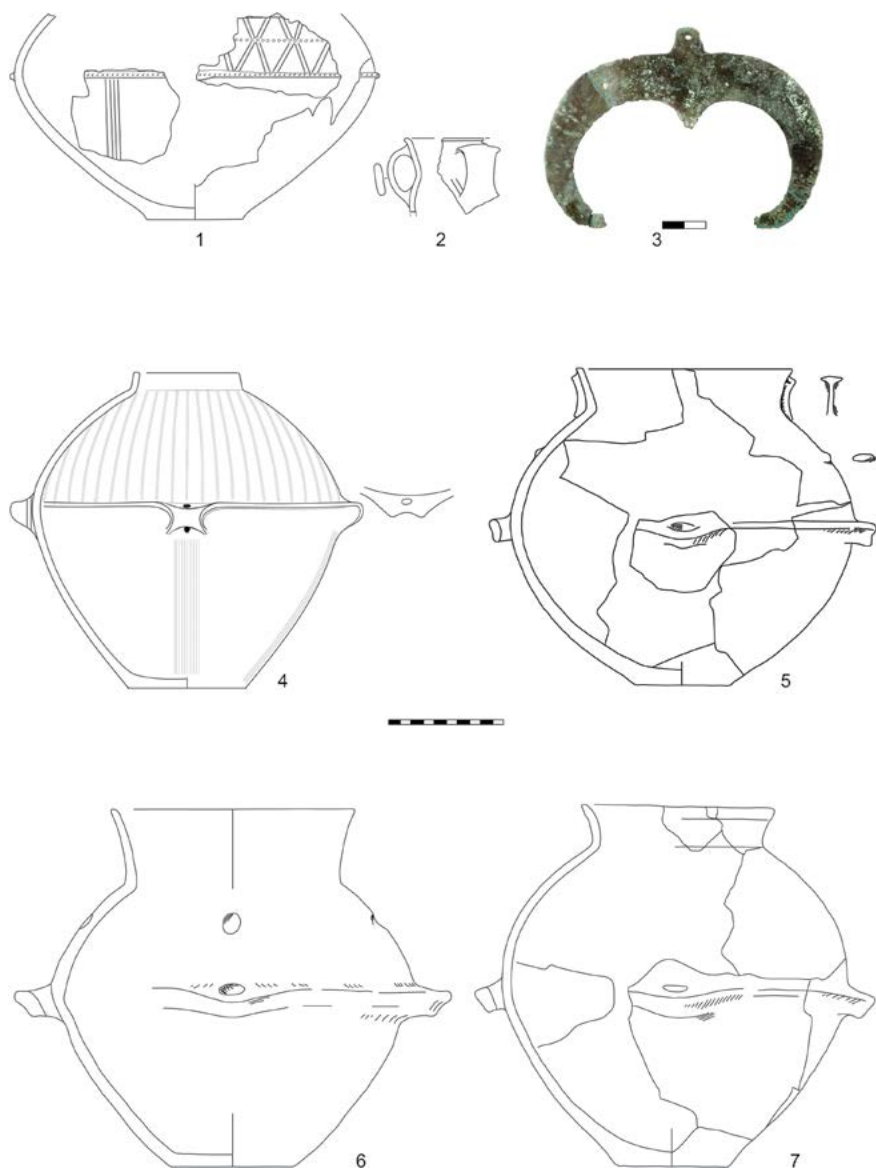


Plate 4.

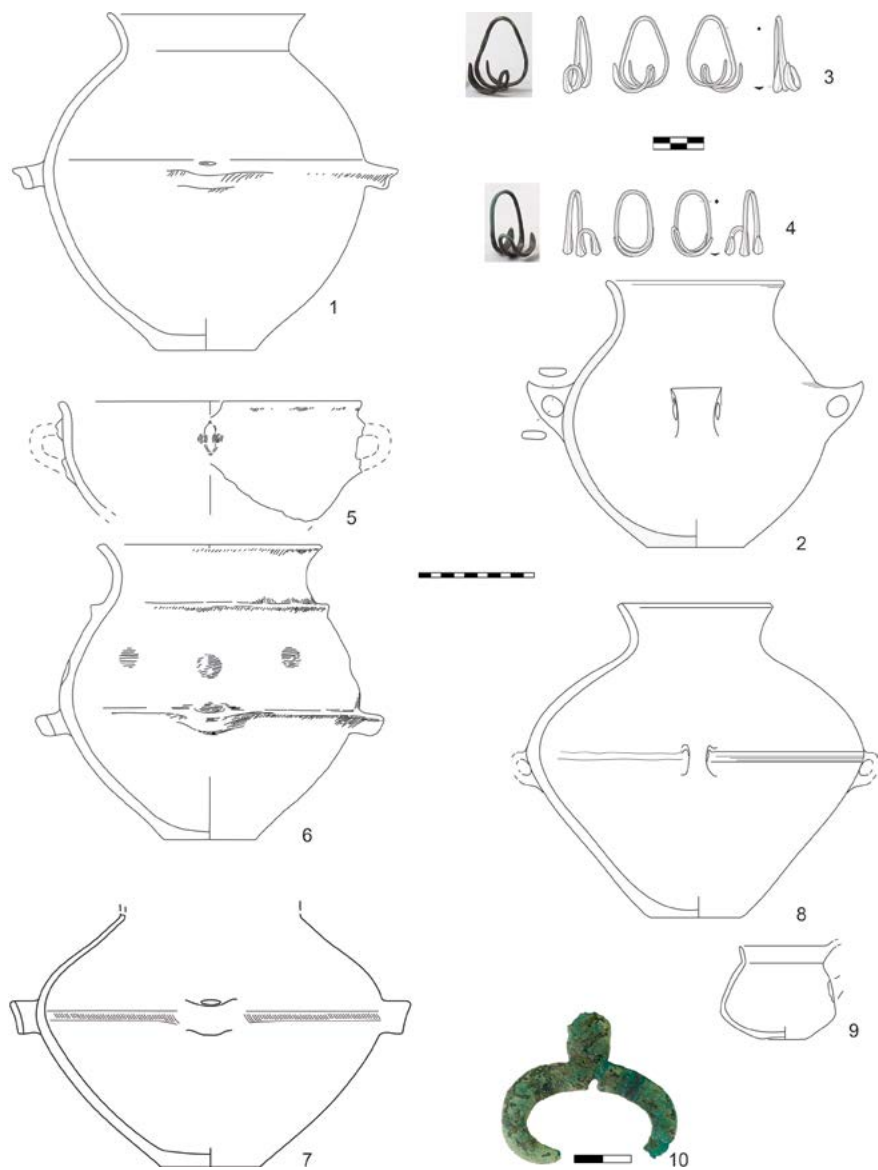


Plate 5.

Crescent-shaped pendants. Two bronze crescent-shaped pendants have been found in the necropolis area so far. The first one comes from feature no. 52 (Pl. 4.3). It was found in a partially destroyed urn, alongside the cremated bones of a juvenile. The second one was found some two meters from a destroyed MBA urn of feature no. 126 (Pl. 5.10), but their relationship is questionable. Both pendants were probably cast and additionally hammered. The feature no. 52 pendant (12.7 cm length), features an apophysis and a perforated hole for hanging (Pl. 4.3). The second pendant (6.4 cm length) has neither an apophysis nor a perforated hole for hanging (Pl. 5.10). Neither pendant was decorated.

Bronze Age crescent-shaped pendants have been the subject of multiple analyses. Although sometimes described with different denominations, they are very common in the second millennium BC in the territories of modern-day Slovakia, Hungary, and western Romania.¹³ For example, crescent-shaped pendants, very similar to feature no. 52 from Baley, come from the Satu Mare find,¹⁴ dated, as mentioned above, to the 1650–1500 BC period. Generally, these ornaments are considered to be “typical products of the Koszider bronze industry”.¹⁵ However, Baley pendants enter variant “A” in K. Jankovits’s classification¹⁶ that, according to him, should be dated in a larger chronological period: “von der Frühabschnitt der mittleren Bronzezeit bis in die Koszider-Periode anhielt”.¹⁷ According to T. Daróczy, the earliest piece of this type comes from Szőreg–Lelőhely, grave 2, dated – based “on the two ceramic pots” – to the latest phase of the EBA; and, the latest example from Luduş–Fabrica de Canepă, grave 1, dated by an AMS date to the 1518–1423 cal. BC period.¹⁸

Generally, these pendants have been recognised as characteristic ornaments for the south-eastern part of MBA Central Europe.¹⁹ Geographically, the two Baley pendants stay far-off the main area of their known distribution so far.²⁰ Here we should mention another such pendant from north-western Bulgaria that comes from the MBA grave no. 4 from

¹³ See, for example, Furmánek 1980, Jankovits 2017, Kacsó 1998.

¹⁴ David 2002, 150/12–14.

¹⁵ Găvan 2015, 125.

¹⁶ Jankovits 2017, 100–101.

¹⁷ *Ibid.* 106.

¹⁸ Daróczy 2021, 16, 29; fig. 1; Pl. II/807a1, III/651b1.

¹⁹ Gogăltan 1999, 172.

²⁰ Găvan 2015, fig. 47.

the Tarnyane necropolis, located east of the city of Vidin. As in the case of Baley, feature no. 52, it was found in a partly destroyed urn.²¹ Considering the above mentioned, we think it is quite possible for this particular type of MBA pendant to form a regional group, located in the western part of the Lower Danube region. Such a claim, in our opinion, could be made for the hair-ring discussed as well, but these possibilities require further investigation.

From a chronological point of view, at the present state of the analyses of the Baley finds, it seems reasonable to accept a general date of the metal ornaments from the site in the first half of the second millennium BC.

Pottery. The MBA Baley pottery assemblage does not offer a large variety of shapes (Pl. 4–6). These are amphorae-like vessels presented by two main groups: first – with an elongated “S” shape, oval body and a short, funnel-like neck; and, second – with an oval body and well-defined, conical neck; a kantharos; a vessel of the so-called “Hängegefäße” type; several bowls; and one cup. Considering the preliminary character of this contribution, we will discuss here some of the main forms, only in order to find their chronological characteristics:

The urn from feature no. 54. It has a globular body, flat base and a short cylindrical neck. At the maximum diameter of the body four vertically perforated handles are placed, with four knobs between them. The vessel has a height of 17 cm, with the diameter of the rim of 10.5 cm. The upper part of the body is richly decorated with superficial incised lines (Pl. 6.2).

A similar urn, covered with a lid, was found in the Verbicioara site. The vessel itself was not decorated.²² A chronological position of the grave in Verbicioara II–III has also been proposed.²³ An even closer parallel, also assigned to the Verbicioara phenomenon, comes from the rescue excavations of the Korbovo–Obala site, in the Iron Gates region. There, in trench no. XI, a vessel very similar to the one from Baley was found. Its upper part was decorated with superficial incised lines. No cremated bones were found in the vessel, but probably because of the fact that it was covered with a lid, the structure was described as a symbolic grave.²⁴

²¹ Василева, Николаева & Василева 2023, fig. 3.2; 3.3.

²² Berciu 1961, 146, fig. 4/8; 7/4.

²³ Shuster, Crăciunescu & Fântâneanu 2005, 163.

²⁴ Крстић 1984, 103, fig. 81/4.

Recently, this pottery shape was largely discussed by A. Szentmiklósi and S. Tincu with regard to a stray find from Hunedoara. The discussed vessel was assigned to the so-called “vessels for hanging” (*hängegefäße*). The two authors related this vessel-type to the Vatin and Verbicioara groups, with some parallels further west, in the “...area of the Hatvan culture”, and dated the Hunedoara find to the Verbicioara III period.²⁵ Geographically, this type of vessel is a characteristic one for the Vojvodina/Banat region during the MBA – from Vărşand (formerly Gyulavarsánd)-Laposhalom, Arad region to the north,²⁶ and to Corneşti,²⁷ Feudvar,²⁸ Vrşac, and Vatina²⁹ to the south.

From a typological perspective, two groups can be distinguished: pedestal vessels and vessels with a flat bottom. The three vessels from the Danube region – Baley, Verbicioara and Korbovo–Obala – have flat bottoms. In our opinion, they form a separate group that marks the south-eastern border of this shape-spread and could be related to the late MBA Verbicioara phenomenon.

The urn from feature no. 47. A large kantharos (21.4 cm in height, without handles) was used as a “container” in this grave. It has a globular body with a short, funnel-like neck and a rim with two symmetrical lobes. Two vertical handles of the “*ansa lunata*” type and two tunnel-like horizontal handles, all four connected with a rib, are placed in the maximum diameter of the body. The decoration, made with incised lines, consists of a decoration motive similar to the Cyrillic letter “Ж”, placed at the upper part of the body, and groups of vertical bands at its lower part (Pl. 6.5).

Similar forms come from the early Verbicioara layers from the eponymous site, in some cases with a rib at the maximum diameter, as well as from the Cârcea site, for example.³⁰ However, most of the Verbicioara kantharoi from Oltenia have so-called “ornithomorph” handles, the “*ansa lunata*” ones being rare there – Rogova, for example.³¹ While globular kantharoi are characteristic for the Verbicioara ceramic repertoire, kan-

²⁵ Szentmiklósi & Tincu 2010.

²⁶ Bóna 1975, 129–131, fig. 140/8, 10–13; 142/12, 13, 15, 17.

²⁷ Morintz 1978, 20, fig. 3/1.

²⁸ Hänsel & Medović 1991, fig. 8/3.

²⁹ Tasić 1974, fig. 139, 140.

³⁰ Berciu 1961, Abb. 5/1–5; 3/2; 7/1; 11/1; Crăciunescu 2004, Pl. LX/1.

³¹ Crăciunescu 2004, Pl. XLI/2.

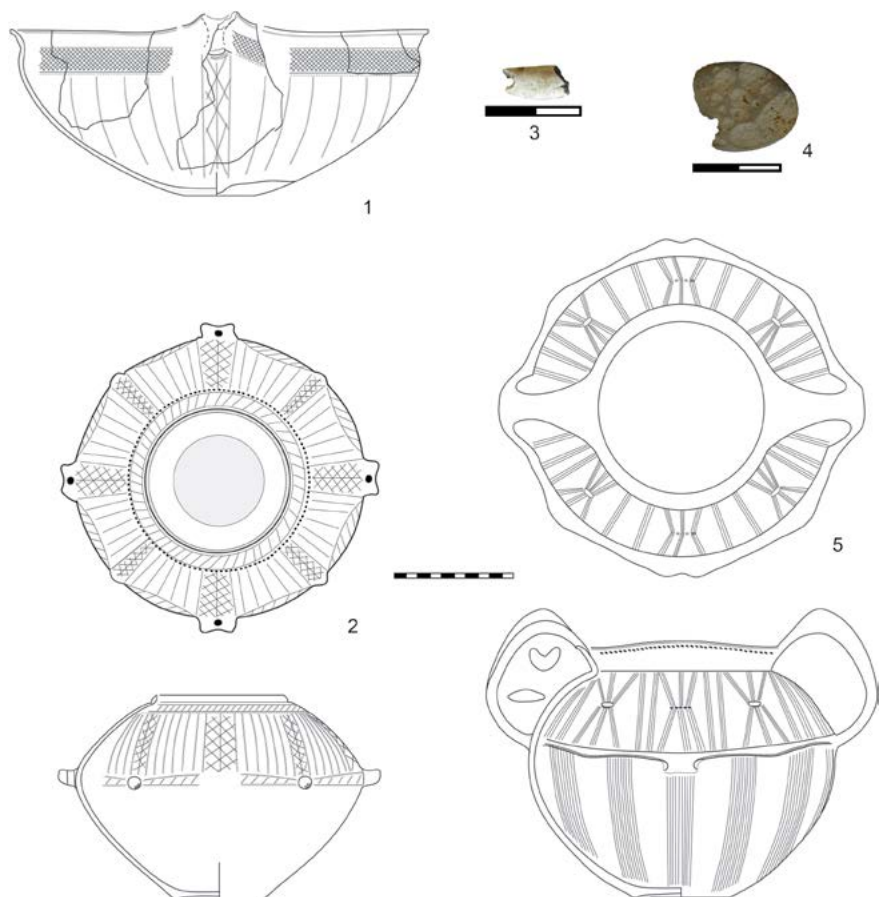


Plate 6.

tharoi with a rim with symmetrical lobes and “*ansa lunata*” type handles are characteristic for the Vatin style.

Generally, a dating of the kantharos from feature no. 47 in the first half of the second millennium BC seems quite reasonable.

Amphorae-like vessels of the first group. They have an elongated “S” profile with a globular body, flat base, and a short, funnel-like neck. At the maximum diameter of the body most of the amphorae of this group have four horizontal – rarely vertical – handles connected with a horizontal rib (Pl. 4. 5–7). The form, without the horizontal rib, finds good parallels in the regions south of Baley. Close parallels with this form could be found in MBA materials from the Gramada site, some 30 km

south-east of Vidin. The AMS dates from there date the MBA features in the 19th–17th century cal. BC period.³² Such vessels were used as urns in the Trnjane necropolis, north-east Serbia, as well. A similar amphora was found in grave no. 10 there, dated to the first centuries of the 2nd millennium BC.³³ Similar ones were used as urns in the grave GC 13/97 from the necropolis on Bor lake.³⁴ For smaller amphorae of this group (feature no. 65, Pl. 5.2), parallels have been found south of the Timok river region as well.³⁵

Generally, that shape is, more or less, characteristic for the MBA in the western Lower Danube, and the Central Balkans. To further support this conclusion, we could mention the amphorae from the Ljuljaci site, Kragujevac region, with radiocarbon dates that place them in the first half of the second millennium BC.³⁶

Amphorae-like vessels of the second group. They have an oval body, flat base, and a well-defined, conical neck. At the maximum diameter of the body, two to four horizontal or vertical handles connected with a horizontal rib are placed (Pl. 4.4). The closest parallel comes from Gamzi-grad, the Magura necropolis.³⁷ Similar amphorae (without the horizontal rib) have been used as urns in Zvezdana (north-eastern Serbia) as well.³⁸

As seen from the arguments above, the conventional approach to the chronological position of the discussed graves from Baley leads, generally, to a possible date in the first half of the second millennium BC. Such a date is supported by the AMS samples from Baley analysed so far. All the LBA ¹⁴C dates from the settlement and the necropolis there (more than 30 in number) are later than 1500 cal. BC, therefore this date could be accepted as a *terminus ante quem* for the MBA Baley graves. Currently, we have at our disposal only one AMS date from the MBA features discussed. It comes from a cremated long bone from the urn of feature no. 160 (Pl. 7). The sample was measured at the Scottish Universities Environmental Research Centre AMS Laboratory, under number SUERC

³² Александров et al. 2020, 895–896.

³³ Karuran, Gavranović & Mehofer 2020, 68, fig. 5/a.

³⁴ Капуран & Миладиновић-Радмиловић 2011, Pl. 2/2.

³⁵ Љуштина 2022, 163.

³⁶ Богдановић 1986, 47, 70; fig. 68.

³⁷ Срејовић & Лазих 1997, fig. 31.

³⁸ *Ibid.* fig. 26.

-109209 (GU63299). The received AMS date is 3480 ± 30 BP. Calibrated in a 95.4% confidence level, the chronological position of feature no. 160 would enter the 1888–1696 cal. BC period. The date enters the upper half of the proposed time-span of the MBA Baley necropolis, and corresponds to the ones obtained for the Gramada and Trnjane sites mentioned above. However, based on the analyses presented, one can speculate that some of the materials from the MBA graves could date later than feature no. 160, namely in the second quarter of the second millennium BC. If this is indeed the case, then we could argue the existence of a second, later phase in the MBA necropolis development, but this assumption still needs additional arguments.

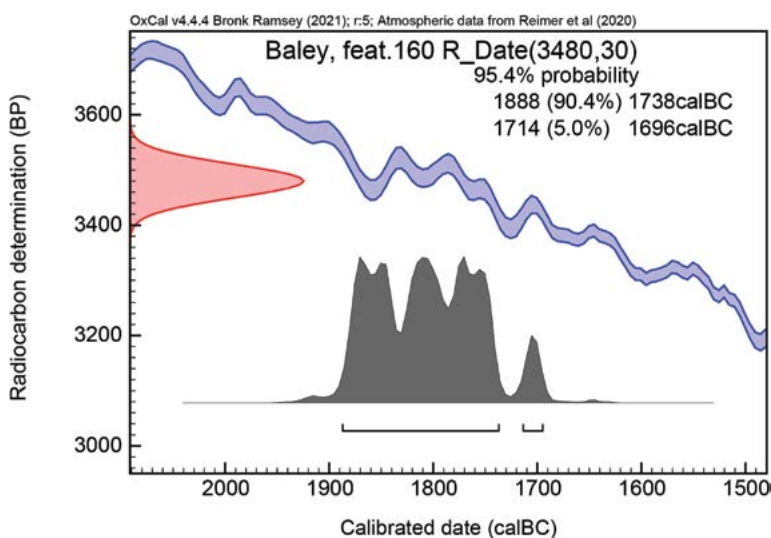


Plate 7.

The Baley necropolis and MBA Verbicioara mortuary practices

From the very beginning of the excavations, the MBA Baley graves were related to the Verbicioara phenomenon. Then the main question of this contribution should be: “How do the recent investigations of the Baley necropolis contribute to a better understanding of MBA mortuary practices in the region?”

In the beginning of the 21 century, Verbicioara mortuary practices were briefly discussed by G. Crăciunescu and I. Motzoi-Chicideanu. Although with some differences, both investigators point out that the number of MBA Verbicioara necropoleis/graves is limited.³⁹ In fact, only four excavated sites in Oltenia provided MBA Verbicioara graves. The first one is the eponymous site, from where one inhumation and two cremation graves were reported. The inhumation grave was assigned to the Verbicioara I period.⁴⁰ In our opinion, it could be dated earlier, probably in the EBA-3 phase. Such a date and parallels of the grave's inventory have already been argued in Romanian literature.⁴¹ The other two graves were found in the "cultural layer" of site "A" at the depth of 0.80–1.0 and 0.40 m, respectively. Both were cremation graves with urns, the first one (discussed above) being covered with a lid.⁴² The two cremation graves were dated to the Verbicioara II–III period.⁴³

The Gruia necropolis (Mehedinți county) provided three cremation graves related to MBA Verbicioara. The stratigraphic situation there is quite similar to Baley, the MBA graves in Gruia being destroyed by later Gârla Mare graves. Only one of the destroyed urns has been illustrated.⁴⁴ The graves were dated to the Verbicioara II period.⁴⁵ The last necropolis securely related to Verbicioara presented here was found in the Desa-Castravița site (Dolj county). It revealed two graves assigned to the early phases of the Verbicioara culture.⁴⁶ Another possible grave was reported from the LBA Cârna–Ostrovogania necropolis: cremated bones in a pit, and Verbicioara I–II sherds in the pit-fill.⁴⁷ The last excavated grave to mention is the Korbovo–Obala cenotaph, already discussed above.⁴⁸

From Tismana and Nicolae Bălcescu (Mehedinți county) two more cremation graves, dated to Verbicioara I–II, have also been reported. Both graves were presented by stray finds – urns with cremated bones

³⁹ Crăciunescu 2004, 70–76; Motzoi-Chicideanu 2011, 445–451.

⁴⁰ Berciu 1961, 145, fig. 15; 16/1, 2.

⁴¹ Motzoi-Chicideanu 2011, 448–449.

⁴² Berciu 1961, 145–152; fig. 4/8,9; 7/4.

⁴³ Shuster, Crăciunescu & Fântâneau 2005, 162.

⁴⁴ Crăciunescu 2004, 74, fig. XVI/6.

⁴⁵ Shuster, Crăciunescu & Fântâneau 2005, 163.

⁴⁶ Gherge, Nica & Ridiche 2004, 14–16, fig. 2; Shuster, Crăciunescu & Fântâneau 2005, 163–164.

⁴⁷ Șandor-Chicideanu 2003, 292, pl. 54; Motzoi-Chicideanu 2011, 447.

⁴⁸ Крстић 1984, 103, fig. 81/4.

found in the respective sites and donated to the local museum.⁴⁹ Possible Verbicioara cremation graves are reported from Crivina, Măracinele, Pades, and Sălcuța as well.⁵⁰

Therefore, prior to 2010 we had at our disposal data, more or less reliable, about ten MBA Verbicioara sites north of the Danube river, with a total number of 14 graves (from which only seven come from archaeological investigations), and one cenotaph south of the river. It should be outlined that some of the graves have not been illustrated at all and, therefore, their relation to MBA Verbicioara is questionable. Perhaps this fact could explain C. Ștefan's conclusion that Verbicioara: "ritul și ritualul funerar sunt cvasinecunoscute".⁵¹ However, even from this limited database, certain general characteristics of MBA Verbicioara mortuary practices known before the Baley excavations could be outlined:

- ♦ Cremation as the only method for the disposal of the dead;
- ♦ Amphora-like vessels used as a "container" for the bones;
- ♦ *Intra* and *extra muros* graves;
- ♦ It could be assumed that all the graves were single ones;
- ♦ The graves were organised in small groups (2–3 in number), rather than in necropoleis;
- ♦ Lack of grave inventory.

Baley investigations as well as a newly discovered necropolis near Tarnyane (Vidin region) provided new data that could add to our knowledge for MBA Verbicioara mortuary practices. The Tarnyane necropolis itself was discovered in 2021, during rescue excavations of a mediaeval site. In fact, two cremation necropoleis were found in the excavated area. The earlier one (with 16 graves) was assigned to the Coțofeni phenomenon, the later (with 26 graves), to MBA Verbicioara. As in Baley, most of the upper parts of the MBA urns, found at approximately 0.30 m beneath the surface level, were destroyed. Twenty-five graves had one urn only; one grave (no. 5) contained two urns. In five cases (graves nos. 17–20 and 26), the MBA urns were surrounded by stones.⁵² The new data acquired from the two burial sites in north-western Bulgaria compared to the already existing data allow the following to be outlined:

⁴⁹ Crăciunescu 2004, 73, figs. XVI/4; XVII/5.

⁵⁰ Motzoi-Chicideanu 2011, 445–451.

⁵¹ "[R]ite and mortuary practices are quasi-unknown" (Ștefan 2005, 100, translation S. Alexandrov).

⁵² Василева, Николаева & Василева 2023, fig. 3.

1. Cremation remains, so far, the only recognised method of disposal in the frame of MBA Verbicioara;
2. The graves form necropoleis with more than 30 graves. The cremation itself took part outside the necropolis area;
3. Use of stones in construction of some of the grave facilities;
4. The vast majority of the graves contained one urn only; several graves contained two or three urns;
5. An internal division inside the burial space existed, some of the graves forming clusters;
6. The ratio between adult–young individuals/children buried was approximately 1:1;
7. Amphora-like vessels were used predominantly as “containers”; in some graves other types of vessels were used as well;
8. At least one third of the urns were covered – with bowls or stones;
9. Grave inventory is rare but still exists. The metal ornaments should be mentioned here, associated with children or young individuals.

Since 1961, when D. Berciu introduced the concept of the “Verbicioara culture”,⁵³ it became probably one of the most controversial phenomena of the BA development in the western half of the Lower Danube region. More than six decades later, with approximately 300 sites known⁵⁴ and monographic studies related to it,⁵⁵ Verbicioara materials still inspire broad discussions.⁵⁶ In 1961 D. Berciu divided the Verbicioara development into five phases, I–III being related to MBA, and IV–V to LBA periods. Most of the discussions mentioned above were related to LBA Verbicioara – the nature and characteristics of phases IV and V, their chronological position, existing (or not) in the Verbicioara *milieu* of new cultural entities such as Bistreț-Ișalnița, Govora-Fundeni, and so on. These arguments, for some archaeologists, ended with the conclusion that Verbicioara is: “mai degrabă o problemă, decât o cultură”.⁵⁷

In our opinion, despite some successful attempts to outline early Verbicioara characteristics (such as settlement patterns, pottery classifi-

⁵³ Berciu 1961.

⁵⁴ Ridiche 2000; Ridiche 2001.

⁵⁵ Crăciunescu 2004; Shuster, Crăciunescu & Fântâneau 2005; Shuster, Crăciunescu & Fântâneau 2006.

⁵⁶ For example, Hänsel 1976, 57–61; Ștefan 2005; Șandor-Chicideanu 2005.

⁵⁷ “[R]ather a problem than a culture”, (Șandor-Chicideanu 2005, 416, translation S. Alexandrov).

cation, metal finds etc.),⁵⁸ most of the problems Verbicioara investigations raise are still related to the lack of published “closed archaeological complexes”. Considering the topic of this contribution, we will address some of the important sites related to the Verbicioara I–III period only. The characteristics of the three investigated sites near Verbicioara remain virtually unknown, the existence of the three MBA levels from there still lacking solid arguments.⁵⁹ The Cârcea–La Hanuri site provided a 0.50 m Verbicioara layer dated to phases I–III. No “closed complexes” have been reported from there, quite a few materials have been published, but without a stratigraphic context.⁶⁰ From the Rogova–La Cazărmi site at least eight features described as “houses”, and dated to Verbicioara I, have been reported. None of them have been associated with any particular archaeological material in the publications.⁶¹ The situation is similar with finds from Mala Vrbica–Livade, where several features related to Verbicioara III have been investigated,⁶² and the materials from there remain unpublished as well. Also south of the Danube, the Antimovo site (located 8 km west of Vidin) yielded one construction level related to Verbicioara III, but still remains unknown to the specialists.⁶³ The situation becomes even more complicated with the total absence of radiocarbon dating from Verbicioara I–III sites.

Considering the above mentioned, we think that MBA Baley and recently discovered features from Tarnyane, with their “closed complexes” associated with pottery shapes and metal ornaments, could contribute greatly to a much better understanding of the MBA Verbicioara development. Special attention should be paid to the metal finds that probably indicate the existence of a particular regional group at the location. Further AMS analyses alongside a comparative study of the materials from north-eastern Serbia could also allow a better understanding of the greatly discussed issues of cultural affiliation of these regions during the first half of the second millennium BC.⁶⁴

⁵⁸ Băjenaru 2014 (parts related to Verbicioara).

⁵⁹ Berciu 1961.

⁶⁰ Bălteanu et al. 2001.

⁶¹ Crăciunescu 2000; Crăciunescu 2004.

⁶² Vukmanović & Popović 1986.

⁶³ Александров & Даскалов 2005; some materials published in Lazić 2016, fig. 7/4,5.

⁶⁴ See for example Kapuran et al. 2020; Kapuran & Milojević 2021; Bulatović 2021; Љуштина 2022, 149–166.

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Marija Ljuština*

University of Belgrade – Faculty of Philosophy

Department of Archaeology

Belgrade, Serbia

A Middle Bronze Age Metalworking Workshop at the Site of Vinča–Belo Brdo?

*In memory of Nikola Tasić,
who helped the Vatin culture become
one of the focal points in my life.*

Abstract: The modest remains of the Vatin culture settlement at the site of Vinča–Belo Brdo revealed some indicators of metalworking activities. Architectural remains and portable artefacts – including a crucible – of an overground object, and an exceptional and rare find of a mould for spearhead casting have been recognised as instructive for metal processing. Being situated in the southern zone of the spread of the Vatin culture, the settlement in Vinča undoubtedly played an important role in the transfer of technological knowledge connected with the invention of bronze socketed spearheads – a new type of device which enriched the Middle Bronze Age metalwork repertoire.

Keywords: Middle Bronze Age, Vatin culture, Vinča–Belo Brdo, metalworking, casting moulds.

Introduction

Research into the Bronze Age inevitably leads to the point at which the question of how important bronze was for Bronze Age societies is raised. As C. Pare nicely expressed, based on the example in Central Europe between Reinecke Bronze A and Hallstatt B, looking at the rich variety of both bronze objects made for functional use and ones for dis-

* mljustin@f.bg.ac.rs

play, one could easily believe that bronze was fundamental both for economic production and social reproduction. According to this approach, obtaining, displaying and exchanging bronze became a vitally serious “game” which had to be played, at least by aspiring socio-economic elites.¹ The scale and organisation of settlements in Central and South-east Europe suggest that these regions were characterised by a greater degree of social complexity than contemporary communities to the north and west. In Southern and South-eastern Europe, too, fortified and aggregated sites are present. In the Balkans, tell sites show a different type of community organisation. Their massive stratigraphy indicates that these settlements remained in place for longer periods, in some cases for centuries, possibly because the demographic potential of these sites enabled continuity to be sustainable.² Having all of the mentioned in mind, it is a challenging task to trace elements of these complex societies, activities connected with metallurgy and metalworking in particular, when dealing with only partially excavated and significantly devastated sites. However, investment into research of the sites which do not seem promising at first glance sometimes results in unexpected successes. The modest remains of the Middle Bronze settlement at the site of Vinča–Belo Brdo provided some interesting indicators of metalworking activities, despite initially being overlooked.

The site of Vinča–Belo Brdo is situated on the right bank of the Danube, today in the metropolitan zone of Belgrade (Fig. 1). It is near the place of the confluence with the small river Bolečica, in the heart of the region known as the Belgrade Confluence – where the Danube is joined by its tributaries the Tisa, Sava, Tamiš, and Morava. The position of this settlement of the tell type was always favourable because of fertile soil, convenience for agriculture and cattle breeding, and because of greater ease of communication with neighbouring regions. The soils surrounding the site are high-quality fertile soils including river alluvium and chernozem. These were highly cultivable even with Neolithic technology, and continue to support modern grasslands and cultivated crops. Sporadic areas of deciduous forests are also found within the area.³ Despite being best known in archaeological literature as the eponymous site of

¹ Pare 2000, 31.

² Cf. Brück & Fokkens 2013, 93, 96.

³ Arnold & Greenfield 2006, 62.

the late Neolithic Vinča culture, the site of Vinča–Belo Brdo in its cultural layers, with more than 10 m of archaeological deposits, revealed some very interesting features belonging to later prehistoric periods. This large artificial mound extends for several hundred meters along the river-bank. It is estimated that over one third of the site has been eroded by the Danube. The site is believed to have also extended several hundred meters back from the river as well.⁴

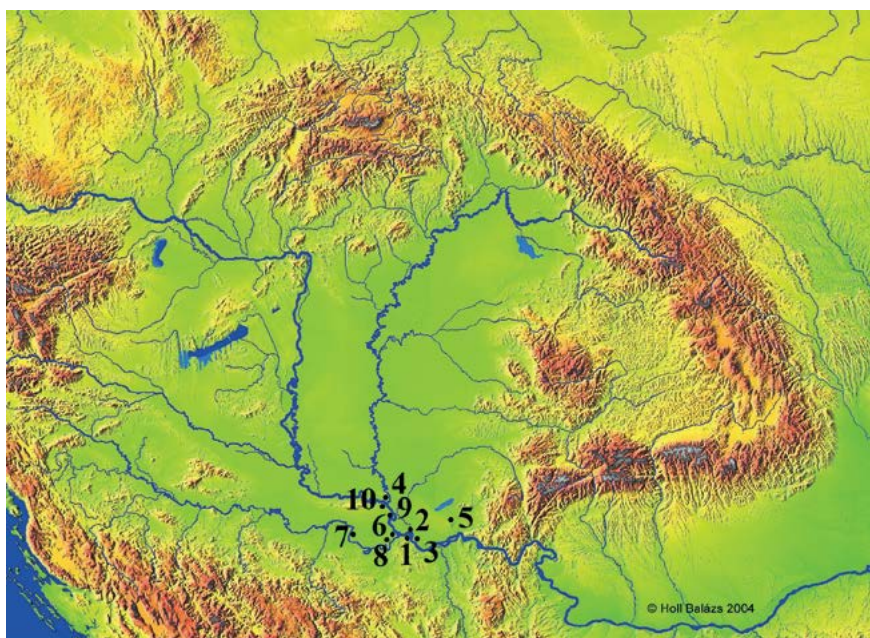


Figure 1 – Map of the Carpathian Basin and the surrounding regions, with the Vatin culture sites mentioned in the text: 1 – Vinča-Belo Brdo; 2 – Pančevo-Najeva/Donjovaroška Ciglana; 3 – Omoljica-Zlatica; 4 – Mošorin-Feudvar; 5 – Orešac-Židovar; 6 – Zemun-Stari Aerodrom in Bežanija; 7 – Hrtkovci-Gomolava; 8 – Surčin; 9 – Belegiš-Šančine; 10 – Stari Slankamen (geographical map: Holl 2004, from <http://www.ace.hu/igcp442/km3.jpg> 20. II. 2025).

⁴ Arnold & Greenfield 2006, 64; Ljuština 2017, 41.

After the hiatus of several centuries, which began when the last Eneolithic inhabitants, recognised as belonging to the Kostolac culture (prior to them, the site had been occupied by the populations of the Bodrogkeresztúr and Baden cultures, whose necropoleis and settlements, respectively, had been explored), had left their settlement,⁵ the site of Vinča was once more settled in the Middle Bronze Age. The Vatin culture settlers established their village just opposite two very important Banatian settlements of the Vatin culture: Pančevo, the site of Najeva/Donjovaroška Ciglana; and Omoljica, the site of Zlatica. The extraordinary geographical position offered them opportunities to have good communication with both neighbouring and remote zones, and at the same time to go successfully into many different economic activities,⁶ including metalworking. Already at this point it is important to emphasise that the two Banatian sites should be considered tells with Bronze Age longevity, while the settlement at Vinča revealed a different occupation scenario.

The site of Vinča–Belo Brdo in the Middle Bronze Age

Vestiges of prehistoric settlements all together forming the tell at the site of Belo Brdo in Vinča drew attention to explorers as early as the beginning of the 20th century. Already the initial phase of exploration, conducted by M. Vasić (excavation campaigns 1908–1913, 1924, 1929–1934), provided material defined as the so-called Pannonian pottery, now recognised as belonging to the Vatin culture settlement.⁷ More recent excavations at Vinča (1978–1986, and from 1998 up to the present) have yielded new data which enabled better consideration of the problem of the appearance and the development of the Vatin culture. During the excavation campaigns of 1978–1986, conducted by Nikola Tasić, an area of 1170 m² was explored, on which traces of the Vatin settlement had been heavily damaged by a medieval necropolis with more than 700 graves.⁸

The remains of the Vatin culture settlement were very modest (Fig. 2). They were recognised as architectural remains of above-ground objects with preserved floorings, open hearths, groups of pottery, and pits.

⁵ Јевтић 1986; Spasić 2010.

⁶ Ljuština 2015; Ljuština 2017, 41.

⁷ Ljuština 2017, 41 with references.

⁸ Tasić 1984a; Тасић 1984b; Јевтић 1986; Tasić 2011; Ljuština 2010; Ljuština 2015; Ljuština 2017.

Consequently, habitation activities are quite difficult to reconstruct. The objects with preserved floorings were few in number – seven in total. For most of them, the dwelling function was presumed by the explorers. Further analysis led us to alternative solutions for some of the objects.⁹ The architectural remains of the Vatin culture above-ground objects were identified as surface zones of scattered larger pieces of fired clay and daub, broken stones, and small slabs, accompanied by fragmented Vatin culture pottery (Fig. 3), as well as three hearths. Deficiency of architectural elements for reconstruction is the reason why a conclusion cannot be reached on the appearance of these objects. One of the possible solutions is light above-ground architecture. On the basis of the position of the defined objects, one can presume that more distinct settlement finds can be expected southwards and south-westwards from the explored

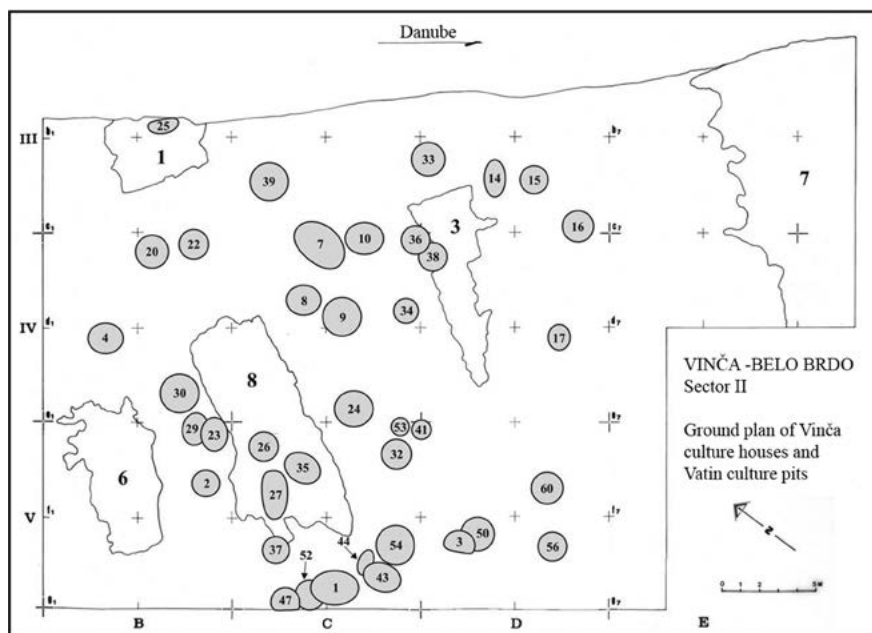


Figure 2 – Vinča-Belo Brdo – sector II: ground plan of the Vinča culture houses and the Vatin culture pits (1–60) and architectural remains (α–δ) (Ljuština 2017, Fig. 4).

⁹ Ljuština 2017, 44.

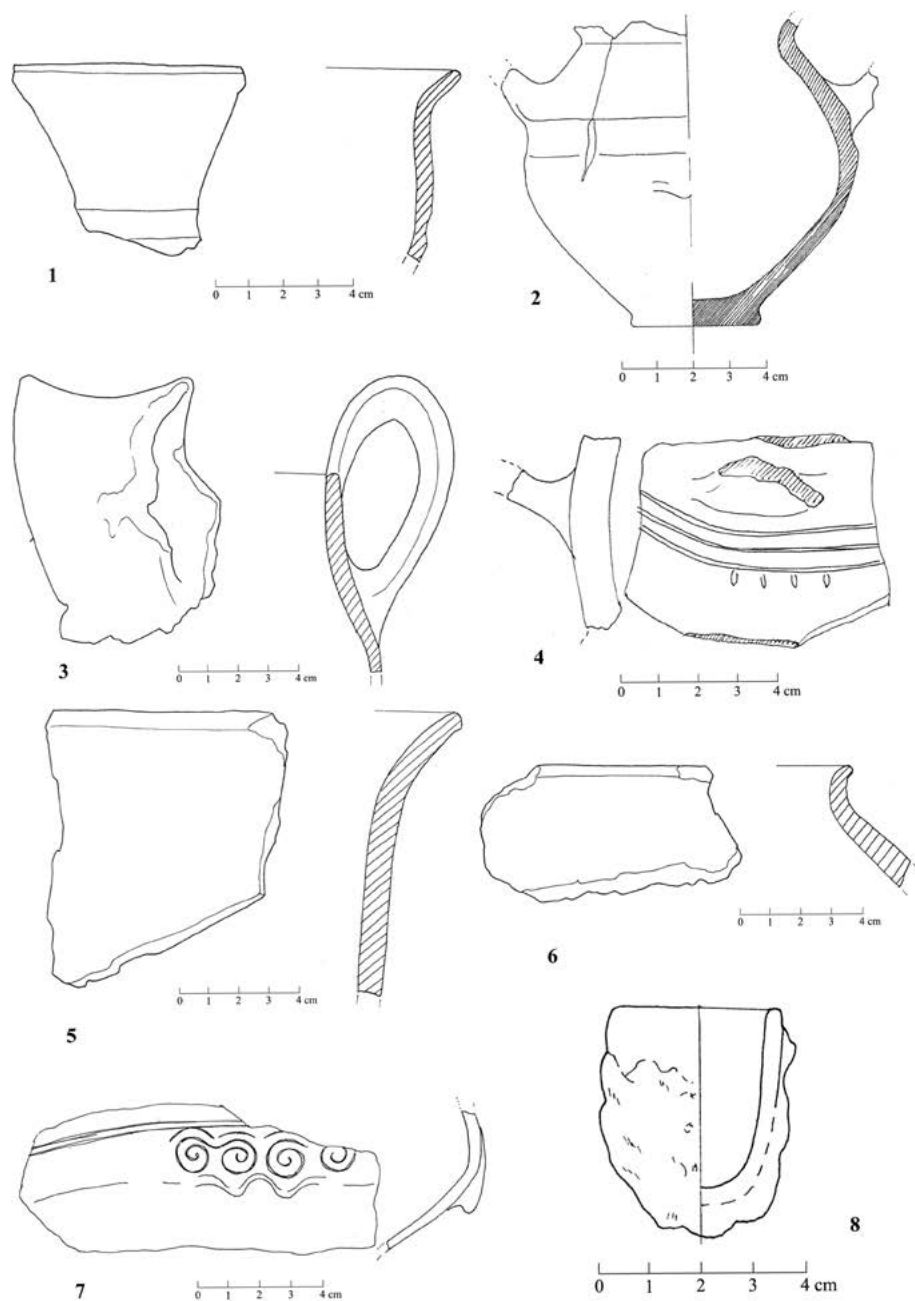


Figure 3 – Vinča-Belo Brdo – sector II: the Vatin culture pottery (Ljuština 2017, Fig. 13).

zone.¹⁰ The explored area exhibits a site intensively occupied during a shorter period. According to these characteristics, and its topographic position, the settlement at Vinča is similar to the Vatin culture settlements in south-eastern Syrmia (Zemun–Stari Aerodrom in Bežanija, Hrtkovci–Gomolava, Surčin, Belegiš–Šančine, Stari Slankamen, etc.).¹¹ However, there are many characteristics it shared with its Banatian neighbours.¹²

As already emphasised, Vinča itself is not the Bronze Age tell: the Vatin culture settlement is only a settlement on a tell accumulated during more remote periods of prehistory, completely different in comparison with what a Bronze Age tell¹³ is expected to be. Vinča–Belo Brdo did not supply any traces of vertical stratigraphy in the Bronze Age. Problematic is the fact that our insight into the Vatin culture settlement is only partial. A larger part of the settled area remained either unexcavated or permanently destroyed, and all of the conclusions should be taken with caution.¹⁴ However, inspection of the original documentation from the 1978–1986 excavation campaigns resulted in an insightful observation concerning traces of metalworking.

Indicators of metalworking activities in the Vatin culture settlement at Vinča–Belo Brdo

The process of transformation of ore to metal object can be divided into at least two separate technologies, both with distinct starting points and goals. The first is the technological transformation of the ore into raw metal. It is highly likely that the first technological step took place only in the mining region, which in the case of Vinča and generally the Vatin culture can be excluded (cf. map on Fig. 1). Next, there is the melting and casting of a piece of raw metal to create an object. This could have taken place spatially far removed from the mining region because the raw material that is at the start of this *chaîne opératoire* is not ore but metal, in different forms (e.g. ingots, casting cakes, scrap). One cannot even be sure

¹⁰ Ljuština 2017.

¹¹ Тасић 1984b, 79; Ljuština 2010, 102.

¹² Ljuština 2017, 56, 58.

¹³ Cf. Gogâltan 2002; Kienlin 2015.

¹⁴ Ljuština 2015, 85–86; Ljuština 2017, 58.

that the metalworker in a region without ores would actually have been aware of the fact that the metal he used was once a piece of rock in a mountain.¹⁵

The *chaîne opératoire* – an ensemble of diverse but complementary approaches to ancient technology – has proved to be particularly suitable for studies of metalworking. The primary goal of the *chaîne opératoire* is to provide every technological study with an aim. Consequently, many different standpoints can merge in the search for the understanding of past technologies. Therefore, for instance, one researcher can address the physical properties of a raw material, while another can deal with the social value of any gesture or artefact, but all their conclusions are meant to be articulated, in quest of the comprehension of the technological system, its agents and, moreover, the functioning of the entire society. The *chaîne opératoire* emerges as a flexible structure that allows movement through fields as heuristically divided as nature, technology, style, society, and culture.¹⁶ B. Ottaway provided a very instructive *chaîne opératoire* of copper working,¹⁷ which is further developed for the study of bronze metallurgy.¹⁸

At sites like Vinča one can expect to find material confirmation of melting and casting. In this particular case, indicative of the metalworking activities are: the architectural remains and portable artefacts, including a crucible, of object β in sq. D-V/3; and an exceptional and rare find of a mould for spearhead casting.

Object β was detected in sq. D-V/3 (Fig. 4). It is partially overlapped by an open hearth. Unearthed were parts of an object of light materials, whose bigger share goes beyond the western profile of sector II. It was recognised as surfaces of fired clay, between which three post holes were set. On the flooring surfaces there were traces of soot and ashes, river shells and animal bones. Two posts, 12 cm in diameter, whose holes had a thin loamy lining, were next to each other, while the third one, 20 cm in diameter, was 1.5 m from them. Presence of Vatin culture pottery indicates that the object was built during the occupation of the site by the bearers of the Vatin culture. A find from the same layer in the same exca-

¹⁵ Cf. Kuijpers 2018, 7.

¹⁶ Martínón-Torres 2002, 38–39.

¹⁷ Ottaway 2001.

¹⁸ Cf. Găvan 2015.

vation square – a crucible with a narrow, conical recipient (Fig. 3/8) – should be taken into consideration when functional determination of the object is in question. Since the hearth remains were also detected nearby, it is possible to assume that the object was not a dwelling, but a workshop for metal processing, perhaps with a patio.¹⁹ Analogous organisation of workspace, including one open part of the object, was confirmed by the unique find of a metalworking workshop at another Vatin culture site – Feudvar in Mošorin,²⁰ which will be discussed in more detail further in the text. Since in the case of Vinča the location of the metalworking object within the whole of the settlement is not known, and disposition of portable finds does not have to be strict (e.g. instructive finds can be discovered at different parts of the settlement, central as well as peripheral),²¹ further jumping to conclusions should be avoided.

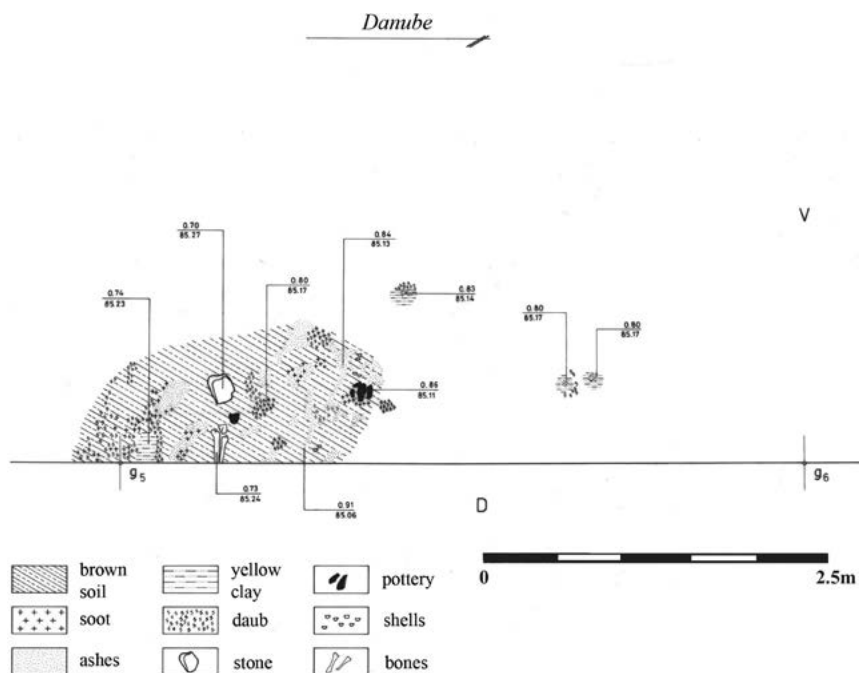


Figure 4 – Vinča-Belo Brdo – sector II: the Vatin culture object β (Ljuština 2017, Fig. 6).

¹⁹ Ljuština 2017, 45–46.

²⁰ Hänsel & Medović 2004, 88–90 fig. 3–4.

²¹ Cf. Ložnjak Dizdar 2013 for Vinkovci.

In search for a secure analogy for the crucible at tells in the Carpathian basin, preferably from a Vatin culture settlement, a find from the mentioned Vatin culture workshop in Mošorin–Feudvar occurred.²² It is a fragment from a vessel of slightly spherical shape, whose initial diameter was around 10–12 cm, and has a vitrified inner surface with green staining originating from oxidised metal particles embedded in its surface and fabric. This evidence points towards the use of the crucible in Feudvar for melting metal prior to casting.²³ The item from Vinča is smaller in size in comparison to the one from Feudvar. Its presence is indicative of melting metal prior to casting, which would be a confirmation of melting as a specific segment in the metalworking *chaîne opératoire* in Vinča.

There are some more crucible finds within the Bronze Age tell settlements, but their context is insecure. Crucibles had to withstand very high temperatures in order to achieve the melting of metal; therefore, a certain combination of fabric and shape was necessary. As a result, in order to increase the resistance to thermal shock, different tempers as well as the general shape of the crucible could have been used to this end. Shallow vessels with wide openings seem to have been particularly appropriate for this purpose. It is generally accepted that early crucibles were heated from above. Unfortunately, very often they are only preserved in small fragments, which might explain their small number in the published reports, along with the fact that some might have been incorrectly identified.²⁴ It can be expected that during the excavations in Vinča some crucible fragments were simply not recognised, and consequently some pieces of information concerning metalworking activities were lost.

The socketed spearhead mould from Vinča–Belo Brdo (Figs. 5, 6) – indicative of casting as another specific segment in the metalworking *chaîne opératoire* in Vinča – was first published by R. Vasić.²⁵ It was discovered in the levelling layer of the part of the site close to the Danube (sq. C-III/2). The item is one half of a two-part mould, made of sandstone. The dimensions of the preserved part are 16.2 by 8.2 by 3.7 cm. The tip is damaged, so the original length of the spearhead was approximate-

²² Hänsel & Medović 2004, 93–94, 101, no. 27, fig. 10/3; Găvan 2015, cat. no. 32, pl. 32/3.

²³ Găvan 2015, 62–63.

²⁴ *Ibid.*, with references.

²⁵ Vasić 2015, 61, T. 16/212.

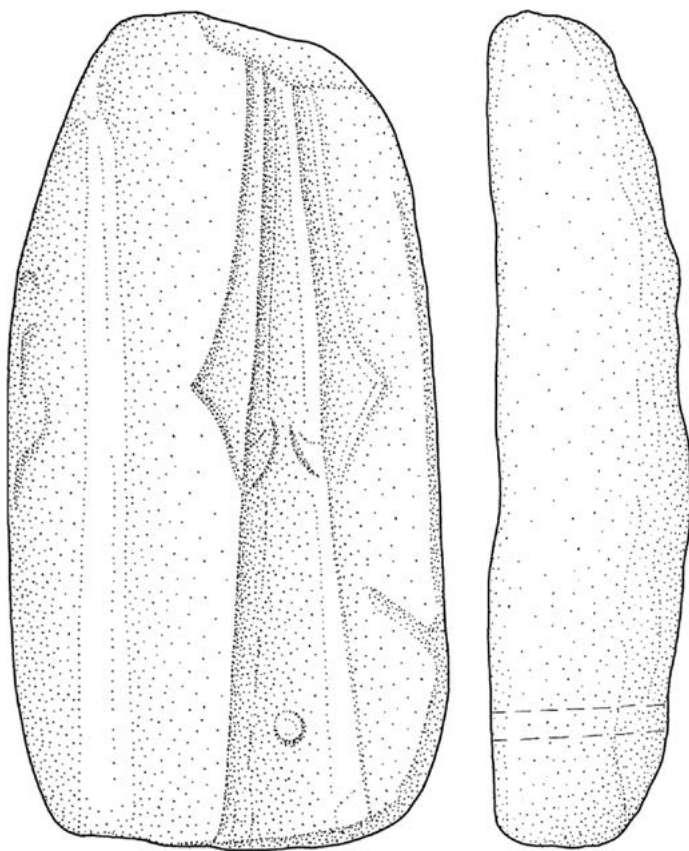


Figure 5 – Vinča-Belo Brdo – sector II: sandstone mould (Vasić 2015, T. 16/212).

ly 18 cm. It was used for casting short spearheads with a vertical central ridge, and a handle socket with a frontal perforation (mounting channel drilled through stone). Two arcuate incisions can be noted at the place where the spearhead is connected to the socket. In the same part of the mould there is a channel which could have served for casting long pins.²⁶

Based on the typology proposed by B. Hänsel, with the shape of the blade as the focal point, the leaf of the spearhead was defined as rhombic

²⁶ Vasić 2015, 61; Ljuština 2017, 60.

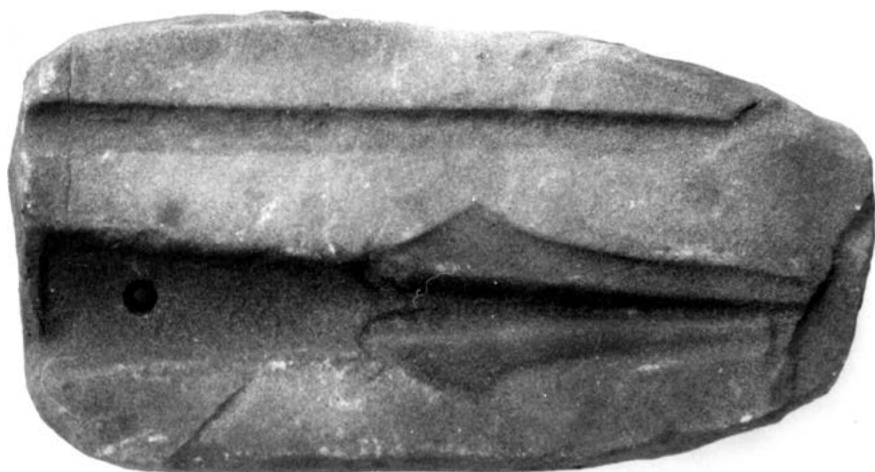


Figure 6 – Vinča-Belo Brdo – sector II: sandstone mould (Ljuština 2017, Fig. 15).

or “kite-shaped”.²⁷ Of technical interest is the “frontal” position of the rivet hole: its recess was created by a retaining channel going through the mould half. This device probably also held the conical core for the spout/grommet. Such cores were excavated in large numbers from the Vatin culture settlement at the site of Feudvar in Mošorin, where the thinner cores may also have belonged to casting moulds for spearheads.²⁸ A half of a fragmentary sandstone casting mould (length of the mould 13.5 cm, maximum width 7.5 cm, minimum width 5 cm, length of the spearhead 13.5 cm, tube diameter 2.9 cm), for a comparable spearhead, came from the tell settlement of Pecica–Șanțul Mare, Arad county in south-western Romania. It is from layer XIII and attributed to the Middle Bronze Age II period.²⁹ Another complete stone mould for spearheads with a rhombic leaf from the same settlement shows two arched ribs at the base of the leaf/leaf spout, resembling the Zemun spearhead.³⁰ The settlement of Pecica also provided casting cores, including a conical one; but they are relatively thick and are more suitable for casting sockets of shaft-hole

²⁷ Hänsel 1968, 75.

²⁸ Hänsel & Medović 2004, 83–III.

²⁹ Găvan 2012, 70, Pl. VIII/7; Gogâltan & Găvan 2014, 21, Nr. 45 Taf. 5, 3; Găvan 2015, Pl. 52/7; Vasić 2015, 62.

³⁰ Vasić 2015, No. 113A.

axes. These moulds are attributed to the Hajdúsámson–Apa horizon. One might think that the arcuate ornament is the plastic execution of the punched decoration on contemporary spearheads from the Hajdúsámson–Apa style group.³¹

According to R. Vasić, the mould from Vinča is currently considered to be the oldest mould from the zone of the Central Balkans, and should prove local production of spears with rhombic heads.³²

Of approximately 370 lance/spear- and arrowheads found in the Central Balkans, only six casting moulds or casting mould fragments survived. This roughly corresponds to the equally small frequency of findings in the neighbouring areas – the Carpathian basin and the western part of the Balkans. Since the hoard finds (along with the grave finds) of these cultural regions (and also in other European regions) only exceptionally contain casting moulds, different reasons to explain this disparity should be sought. All the spearhead moulds come from just four settlements: Vinča, Feudvar,³³ Vršac,³⁴ and Rasna.³⁵ When frequency of the findings is in question, the limited durability of ceramic casting moulds must be taken into consideration.³⁶

The socketed spearhead is a new type of device which entered the metalwork repertoire of the Carpathian basin as early as the second half of the Hungarian Middle Bronze Age. Up to 2015, eighteen finished products and six moulds used for the production of these artefacts had been published from the Bronze Age tells.³⁷ The mould finds came from the sites of Mošorin–Feudvar (two pieces),³⁸ Pecica (two pieces),³⁹ Novaj (one piece),⁴⁰ and at Nižná Myšľa (one piece).⁴¹ All spearheads discovered in these Bronze Age tells belong to the socketed type, with the socket tube formed by core-casting.

³¹ Vasić 2015, 62.

³² Cf. *Ibid.* 42–45.

³³ *Ibid.* No. 213, 213 A.

³⁴ *Ibid.* No. 214.

³⁵ *Ibid.* No. 214 A, 214 B.

³⁶ *Ibid.* 61.

³⁷ Găvan 2015, 112.

³⁸ *Ibid.* cat. no. 32/3–4, pl. 36/9.

³⁹ *Ibid.* cat. no. 42/4, 26, pl. 52/7; 54/16.

⁴⁰ *Ibid.* cat. no. 37/3.

⁴¹ *Ibid.* cat. no. 36/4.

As already mentioned, classifications of Bronze Age spearheads from the Carpathian basin usually follow criteria such as the shape of the blade, the type of the shaft aperture, as well as the ratio between the length of the blade and that of the socket.⁴² T. Kovács differentiated three main types among the metal spearheads dating to the Hungarian Middle Bronze Age: type A characterised by spearheads with a blade base extending at an upward angle from the socket, and forming a rhomboidal shape with the upper blade edges; type B which entails spearheads with a laurel-shaped blade, and a shaft aperture that extends into the body of the blade, and is continued externally as a midrib to the tip; and type C, which contains spearheads with a long, ogival shape, and ribbed sockets with a frontal perforation.⁴³ The spearheads of Bronze Age tells can mostly be grouped in the first two types. The specimen from Ottomani–Cetatea de Pământ,⁴⁴ and the matrix engraved in one of the moulds from Pecica,⁴⁵ would be the closest analogy for the mould from Vinča, together with similar artefacts uncovered at Sighișoara and Hernádkak, Grave 122, as well as a specimen made of bone found at Vărșand, which supposedly had a bronze tip. All these were considered by T. Kovács as representative of his type A. Moreover, according to Kovács, these are the earliest metal spearheads from the Carpathian basin, dating to a period prior to the Koszider phase at the end of the Hungarian Middle Bronze Age.⁴⁶

Bronze Age spearheads are commonly interpreted as thrusting and throwing weapons, depending on their morphology, while their possible use in hunting has also been proposed. Richly decorated spearheads are thought to have functioned as status symbols, prestige items used for display, or connected to the ritual sphere. Considering that most of the spearheads from the Central European Early Bronze Age and beginning of the Middle Bronze Age were discovered in hoards, their role as votive offerings should also be taken into account. Socketed spearheads were commonly fixed to a wooden shaft with the help of pegs, as attested by the peg holes visible in the sockets.⁴⁷

⁴² Găvan 2015, 113.

⁴³ Kovács 1975, 26–28.

⁴⁴ Găvan 2015, cat. no. 40/4, pl. 46/7.

⁴⁵ *Ibid.* cat. no. 42/4, pl. 52/7.

⁴⁶ Kovács 1975, 26–31; Găvan 2015, 113.

⁴⁷ Găvan 2015, 113.

Lack of final products, that is, of metal artefacts in Vinča is not unexpected. Generally speaking, if a metal artefact occurs within a settlement site, several explanations for its occurrence can be taken into consideration: deliberate deposition, accidental loss, or discarding, with the possibility that some of the artefacts might have been overlooked at the time of abandonment or, in some cases, conflagration. Opting for one explanation or another is always dependent upon the find context.⁴⁸ Additionally, there are regions of Europe (e.g. Scandinavia) which reveal a paradoxical trend in Bronze Age archaeology: the dislocation between production of bronze objects and their final deposition. This means that some areas, in which very extensive Bronze Age metallurgical workshops have been explored, yielded comparatively few bronze artefacts.⁴⁹ In the case of the excavated part of the site of Vinča, metal objects were obviously carefully kept. They were neither accidentally lost, nor deliberately deposited, at least at the part of the site that has been excavated so far.

Metalworking activities in the territory of the Vatin culture and neighbouring regions of the Carpathian basin

Metalworking is the aspect of the Vatin culture economic activities to which insufficient attention has been paid so far, with very few exceptions. Since the Vatin culture was integrated into the system of Middle Bronze Age cultures of the Carpathian basin, it can be expected that the regularities observed at the Middle Bronze Age tells will prove instructive for other types of settlements as well.

The metalworking evidence uncovered within the Bronze Age tells in the Carpathian basin consists mostly of artefacts associated with melting and casting, such as casting moulds, clay nozzles/tuyères, casting cores, rarely crucibles, and other casting debris. Considering the currently available evidence, it seems more probable that the primary processing of ores, as well as smelting, were carried out in the vicinity of the ores or in nearby sites, while settlements situated farther away from the sources – in the case of the Vatin culture all of the sites (cf. Fig. 1) – were receiving already smelted metal, with the primary activities conducted at these sites being melting and casting, as well as finishing work. Unfortunately,

⁴⁸ Găvan 2015, 40.

⁴⁹ Melheim, Prescott & Anfinset 2016.

some of the instruments regularly used in these activities (casting ladles, crucibles, anvils, hammers, polishers, whetstones, along with other tools for finishing work and decoration) are rarely mentioned in the published reports, except in those studies that specifically deal with these types of artefacts, studies which are also extremely rare for tell sites. What is particularly important, this paucity should not be seen as a reflection of their low frequency in the past, as these objects were possibly subject to misidentification, not being as easily recognisable as, for example, casting moulds or clay tuyères, which are usually better preserved and better represented in the publications.⁵⁰ Clay casting cores are only known from Moşorin–Feudvar⁵¹ and Pecica-Şanţul Mare,⁵² although it is highly probable that such artefacts were used at other sites as well – at least at those from where casting moulds for socketed objects are documented – and have not been recognised as such. Similarly, casting debris has only been mentioned in Feudvar and Pecica.⁵³

If we go back to the casting moulds, interestingly, they turned out to be the most numerous artefacts related to metalworking found within Bronze Age tells, with 218 specimens being attested at 44 sites. More than half of these objects (117) were made of stone (mostly sandstone), while only 65 moulds were made of clay. Unfortunately, for 36 casting moulds found in Bronze Age tells, the material that they were made of was not specified in the published reports. However, these numbers should not be taken as representative of their actual frequency in the past, but might instead reflect recovery rates – since stone moulds are more durable, better preserved, and generally more visible in the archaeological record than moulds made of other materials. Clay moulds are certainly more fragile. It appears that one advantage of using clay moulds is that the resulting casts have a finer surface, necessitating less finishing work. Also, there is no reason to exclude the possibility that some of the Bronze Age finished artefacts in the Carpathian basin might have been manufactured by sand-casting, possibly even within the tells, although there is no secure way to either prove or disprove this assumption.⁵⁴

⁵⁰ Găvan 2015, 51–52.

⁵¹ *Ibid.* cat. no. 32.

⁵² *Ibid.* cat. no. 42.

⁵³ *Ibid.* 52, with references.

⁵⁴ *Ibid.* 54–55, with references.

The most frequently employed type of stone for the manufacture of casting moulds were sandstone, soapstone, and schist. Sandstone has several properties that make its use appropriate as a casting mould: it is not hard to work, and has a relatively good heat resistance.⁵⁵ These advantages undoubtedly lead the metalworker(s) from Vinča to the choice of sandstone moulds.

Most of the casting moulds found in Bronze Age tell settlements display only one matrix (127), and were therefore intended for producing only one type of artefact at a time. However, moulds with two (20), three (14), or four matrices (5) are also known, although in smaller quantities.⁵⁶ B. Armbruster developed a classification of casting moulds according to their complexity, which in turn is dependent upon the complexity of the artefact to be cast, making a point that throughout the Bronze Age simple objects were still being produced along with more complex ones, and therefore the complexity of the mould cannot always be linked to technological developments.⁵⁷ This concept seems plausible for the case of Vinča, since the mould was used to cast a simple artefact (pin), along with a more complex one (spearhead).

There are very few metalworking workshops in the Carpathian basin that are chronologically positioned to the Early and Middle Bronze Age. Indicators of the existence of metalworking workshops have been recognised at a number of tell sites.⁵⁸ For example, a considerable number of artefacts related to melting and casting (casting moulds, clay cores, a clay tuyère, pieces of casting debris) have also been uncovered at Pecica–Șanțul Mare, an indication that at least one workshop might have existed at this site.⁵⁹ Interestingly, the best preserved and documented find of this type of workshop was revealed in the Vatin culture settlement at the site Mošorin–Feudvar. The burnt object from Feudvar is one of the very few cases in which a metalworking workshop and its inventory were documented *in situ*, thus providing evidence for different activities in the *chaîne opératoire* of the metallurgical process (melting and casting in two-piece moulds, or using the *cire perdue* technique, core casting, polishing

⁵⁵ Găvan 2015, 55, with references.

⁵⁶ *Ibid.*

⁵⁷ Armbruster 2010, 12–14.

⁵⁸ Găvan 2015, 71. with references.

⁵⁹ Gogâltan & Găvan 2014, 12–13, 19–22; Găvan 2015, 74–75.

and finishing of the cast artefacts). The workshop was uncovered in an intermediate Vatin culture layer and was well integrated in the organised settlement plan preserved during at least six of the identified layers, characterised by rectangular houses of more or less similar size and orientation, arranged in parallel rows. The distribution of metalworking evidence at the site was restricted to this particular layer and more precisely to the mentioned structure and its close surroundings. None of the preceding or succeeding excavated layers and buildings yielded any other artefacts related to metalworking.⁶⁰

The workshop in Feudvar, 9.5 m long and 5 m wide, was similar in size, construction technique, and orientation to other houses at the site, whose lengths varied between 10 and 12 m, with widths in the range of 5 to 6 m. However, the internal arrangements as well as the assemblage uncovered within it make this object unique: it lacked the typical oven and storage facilities of other domestic buildings, and presented instead a working space in its southern part (measuring approximately 2.5 by 5 m), separated by a thin internal wall from the rest of the structure and lacking the exterior eastern wall.⁶¹ Lack of the external wall reminds us of the situation in Vinča, where the remains of object β indicate a similar openness of working space.

In the case of Feudvar, the work area, on both sides of the collapsed southern wall, provided the largest concentration of metalworking related artefacts: 114 artefacts with clear descriptions of their stratigraphic position. This distribution of finds led the excavators to believe that the tools of the metalworker were originally placed upon shelves that were either located against the southern wall or hung from it. The excavators support this claim by giving examples of bivalve moulds, one half of which was found by the wall inside the house and the other half directly on the wall but outside the house. Supposedly, the open area to the south of the construction was also used for metalworking activities, and for the disposal of waste products resulting from the “lost wax” casting technique. Unfortunately, the hearth that was originally located in the working space was almost entirely disturbed by an Iron Age pit; however, its

⁶⁰ Hänsel 1992, 83; Hänsel & Medović 2004, 88; Falkenstein, Hänsel & Medović 2014, 115–117, fig. 4; Gävan 2015, 72.

⁶¹ Hänsel & Medović 2004, 88–90 fig. 3–4; Gävan 2015, 72.

existence could be partially reconstructed through the discovery of a heavily burnt area covering a surface of around 40 cm underneath the pit.⁶²

Social significance of metalworking activities for Vatin culture communities

Dealing with metalworking activities raises the questions of agents. Who were the metalworkers, and what was their position in the Vatin culture society? Answers to these questions are entangled with the social significance of metalworking. If we focus on the find of the only metalworking workshop discovered *in situ* in Feudvar, the excavators of this site suggested that concerned here was a full-time specialist, a professional crafts-person distinguished from the other members of the community who, however, did not seem to be of a high social rank. The absence of cooking and storage facilities in the house was taken to imply that at least some of the customers were providing food to the metalworker, as well as raw materials, since there were no metal supplies or raw materials recovered.⁶³ On the other hand, this situation can simply point to the strict separation of activities in everyday life of any person. It means that even if the same person should have taken care of both food and metal processing, the activities required separate spaces.

It should also be noted that the absence of a stock of metal can be seen as a result of recycling, with the inhabitants recovering the metal supplies after the destruction of the building, as the excavators previously implied with regard to the undamaged tools and moulds. Due to the limited space available in the small working area of the workshop (2.5 by 5 m), it was suggested that only a small number of persons could have been active there at the same time, mainly the metalworker and presumably a few additional assistants.⁶⁴ In T. Kienlin's opinion, the persons working there should be viewed as members of a family or kinship group that contributed to metalworking activities according to age and gender.⁶⁵ Because no further metalworking evidence was revealed in any other structure or in any other layer at the site, it has been suggested that the metal-

⁶² Hänsel & Medović 2004, 90–92; Gävan 2015, 67, 69, 72–73.

⁶³ Hänsel & Medović 2004, 94–95.

⁶⁴ *Ibid.* 93.

⁶⁵ Kienlin 2010, 117.

worker might not have been a member of the local community, but instead an itinerant craftsperson, who was active in Feudvar only during this particular phase.⁶⁶ A different reading of the workshop was provided by T. Kienlin, who rejects the idea of a craftsman who travelled from one place to another and who resided only for a short time in the settlement, pointing to the fact that the object/house was similar to other domestic buildings on the site, and integrated in the overall layout of the settlement, thus suggesting that the metalworker was a member of the community, and that there was a local tradition of metalworking that was visible in the excavated area only during this phase.⁶⁷ It is indeed likely that the metalworker was integrated within the local community, and the fact that the life-span of the house was estimated at about 50 years does suggest a stability that is not to be expected of an itinerant smith. In any case, even though the metalworking equipment was not fully preserved and many questions regarding the metalworker and his relation to the community remain unanswered, Feudvar provided us with a valuable example of how a metalworking workshop operating within a Bronze Age tell settlement looked like, and the scale of the activities undertaken there.⁶⁸

In contrast to the model proposed by C. Pare, with metalworking tightly connected with the rising Bronze Age elites,⁶⁹ which was the initial idea of this study, stands T. Kienlin's model of a Bronze Age society with an essentially kinship-based organisation.⁷⁰ According to this model, and based on ethnographic evidence, in such kinship-based groups there is a great variability in craft specialisation, organisation of production, social position of (metal)-craftsmen, the activities carried out, and objects produced. Specialised full-time metalworkers can be found attached to an elite, alongside those producing for a village community that derives most of its living from agriculture, the metalworkers being firmly integrated in local groups in spite of ethnic differences and high mobility, both smiths held in high esteem and those who were the subject of superstition and segregation. In T. Kienlin's view, metallurgy cannot be said in any way to be connected exclusively to elites. Part-time metalworkers

⁶⁶ Hänsel & Medović 2004, 95.

⁶⁷ Kienlin 2010, 117.

⁶⁸ Găvan 2015, 74.

⁶⁹ Pare 2000.

⁷⁰ Kienlin 2010.

may be able to produce the most complex objects, and the communication of metallurgical knowledge does not have to rely on the presence of strong leadership and political control to be efficient. More likely it was “self-organised” in some manner, among segments of Bronze Age society familiar with the practice of metallurgy, and part of wider kinship-based networks of informal exchange. One should expect that metalworkers were conceived as more or less firmly integrated within the local communities. Initially, metalworking may have been just one “specialisation” or preference among others, although one that developed into a firm tradition with a long-term tendency towards increasing scale, and increasingly becoming a full-time occupation.⁷¹

A hypothesis about metallurgy as a secondary activity in tell-type settlements in western Romania was put forward by A. Găvan.⁷² In view of this study, on the example of sites in western Romania with remains of metallurgical activities, as well as their peripheral position in the network of such settlements in the Carpathian basin, a similar model could be potentially applied to all tell-type settlements of the Vatin culture. Despite the scarce indicators of metalworking activities, it can be expected that even the Vatin culture tells without these indicators (the site of Židovar in Orešac,⁷³ in the first instance, since it is presumed that this deficiency is mostly the consequence of the insufficient state of exploration and publication) functioned as parts of the network. On the other hand, the site at Vinča, though itself not a Bronze Age tell, might have served as an important metallurgical point in the periphery towards the inner part of the Balkans.

Conclusions

Vatin culture settlements benefited from being established in the vicinity of the Danube — a great connective factor in the vibrant world of the Middle Bronze Age. We can imagine that at some moment in the Middle Bronze Age, communities of the Vatin culture crossed the great river and settled the northernmost parts of the Balkans. The modest remains of the settlement at Vinča provide only a silhouette of former life activities.

⁷¹ Kienlin 2013, 432–433.

⁷² Găvan 2012.

⁷³ Cf. Ljuština 2013.

According to our present knowledge, the settlement, whose existence was presumed to be relatively short in time, was intensively occupied and simply abandoned. Its explorers did not find any trace of violent actions which could have led to its end. During the occupation of the site, it could have acted as an important point in the peripheral part of the settlement zone of the Vatin culture. Its importance might have been in the network of metalworking activities.

As in the case of Bronze Age tells in the Carpathian basin, some of them belonging to the Vatin culture, the metalworking evidence uncovered in Vinča consists of artefacts associated with melting and casting. The currently available evidence speaks in favour of the primary processing of ores, followed by smelting at some other sites, most probably in the vicinity of the mineral resources. It is expected that the settlements situated farther away from the sources, Vinča and other Vatin culture sites being among them, were receiving already smelted metal. Accordingly, activities conducted at these sites, as attested by archaeological research, are melting and casting, as well as finishing work. Vinča provided a ceramic crucible, the presence of which is indicative of melting metal prior to casting, which would be a confirmation of melting as a specific segment in the metalworking *chaîne opératoire*. The socketed spearhead mould attested casting as another step in the metalworking *chaîne opératoire*. The mould from Vinča is currently considered to be the oldest mould from the zone of the Central Balkans and should prove local production of spears with rhombic heads. Consequently, the Vinča settlement undoubtedly played an important role in the transfer of technological knowledge connected with the invention of socketed spearheads – a new type of object which enriched the Middle Bronze Age metalwork repertoire of the Carpathian basin, and over the course of time spread to the neighbouring regions, including the Central Balkans.

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Florin Gogâltan*

Institute of Archaeology and History of Art
Cluj Napoca, România

Victor Sava

Institute of Social Sciences and Humanities "Titu Maiorescu"
Romanian Academy, Timisoara Branch
Timișoara, România
Arad Museum, Palace of Culture
Arad, România

Andrei Stăvilă

West University Timișoara
Timișoara, România

The Middle Bronze Age in Romanian Banat. About the Cornești–Crvenka group/ceramic style

Abstract: The late scholar Nikola Tasić, forty years ago, while analysing the Vatin culture, identified a group of finds for which he suggested the term Crvenka–Cornești. The present paper summarises key moments that shaped the definition, the chronological issues, the area of distribution, and the origin of the Cornești–Crvenka ceramic group/style. We consider the Cornești–Crvenka ceramic group/style to be an archaeological reality of the Middle Bronze Age (ca. 2000/1900–1600/1500 BC) in historical Banat, belonging to the Vatin cultural circle. It was formed on the basis of the “horizon with *Besenstrich und Textilmuster* ceramic”, typical of the Early Bronze Age in this area.

Key words: Romanian Banat, Middle Bronze Age, history of research, chronology issues, area of spread, origin

The scholar Nikola Tasić (1932–2017), throughout his prestigious scientific career, made an essential contribution in defining key research directions of the Bronze Age of historical Banat. His name is associated

* floringogaltan@gmail.com

with the development of a relative chronological system,¹ with the problematics of the Makó,² Vinkovci,³ Mureş,⁴ Vatin,⁵ and Verbicioara⁶ cultures, and with the Late Bronze Age urnfields (Belegiš–Cruceni),⁷ Panonian encrusted pottery,⁸ and with the tumulus phenomena (*Hügelgräberkultur*).⁹ Last but not least, he also determined the nature of the links between these communities and other more distant cultural areas.¹⁰

When discussing the Middle Bronze Age in Romanian Banat, it should be noted that Nikola Tasić was the first to propose the idea of a separate group of finds, which he named “Funde vom Typ Crvenka–Corneşti”. These were seen as assemblages that did not belong to the Vatin culture, but in which Verbicioara elements are present.¹¹ This group was considered as a local manifestation, as an evolved aspect of the Verbicioara culture, which was placed at the end of its evolution (characteristic of the third phase), and strongly influenced by the “Vatin style”.¹² Next, let us see how this scientific debate evolved prior to N. Tasić, and during the last forty years.

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The history of research. Almost twenty years ago, a summary of the work on the Vatin culture was published,¹³ and recently supplemented by the synthesis proposed by M. Ljuština.¹⁴ A brief review with the addition of

¹ Tasić 1967; Тасић 1983; Tasić 1984a; Tasić 1989; Tasić 1991; Тасић 1997a; Tasić 2004.

² Тасић 1983.

³ Tasić 1968; Tasić 1981; Тасић 1983; Tasić 1984b; Tasić 1989; Tasić 2004.

⁴ Tasić 1981; Тасић 1983; Tasić 2004.

⁵ Тасић 1965b; Tasić 1974a; Tasić 1977; Tasić 1981; Tasić 1982; Тасић 1983; Tasić 1984c; Тасић 1984e; Tasić 1988a; Tasić 1991; Тасић 1997a; Tasić 2004.

⁶ Тасић 1983; Tasić 1984d; Tasić 1998.

⁷ Tasić 1961; Tasić 1962; Tasić 1963; Tasić 1964; Тасић 1966; Tasić 1971; Тасић 1983; Tasić 1988a; Тасић 1997a; Tasić 1997b; Tasić 2001; Tasić 2004.

⁸ Тасић 1965a; Тасић 1965b; Tasić 1972; Tasić 1982; Тасић 1983; Tasić 1988a; Tasić 1989; Tasić 1995; Tasić 1996; Тасић 1997a; Tasić 1998.

⁹ Тасић 1983; Tasić 1989.

¹⁰ Tasić 1973; Tasić 1974b; Tasić 1976; Tasić 1988b; Tasić 1997b.

¹¹ Тасић 1983, 67, 153.

¹² Тасић 1983, 67–68; Tasić 1984d, 87.

¹³ Gogăltan 2004. See also the English version of the article, with several adjustments and bibliographical additions (Gogăltan 2022).

¹⁴ Лјуштина 2022.

older and newer opinions on the paper written in 2001 will serve as an introduction to the Cornești–Crvenka ceramic group/style.

First pottery assemblages, which would later be attributed to the Vatin culture, were published as early as 1726 by Luigi Ferdinando Marsigli.¹⁵ The scholarly dissemination of the finds from Vatin, and the area around Vršac, is due to B. Milleker.¹⁶ The term “Vatin” culture, group, or type – more or less closely related in meaning – gradually became accepted in the literature through the contributions of scholars such as K. Miske,¹⁷ H. Schmidt,¹⁸ V. Pârvan,¹⁹ V. Gordon Childe,²⁰ C. Dunăreanu-Vulpe,²¹ I. Nestor,²² F. Tompa,²³ D. Berciu,²⁴ and V. Dumitrescu.²⁵

As a further step in the understanding of what was by now called the Vatin culture, we must review the work of M. Grbić. In addition to the publication of new archaeological sites (Pančevo, Omoljica, Čoka, Ljuljaci, etc.), preliminary opinions are advanced on the origin, area of spread, and chronology of this culture.²⁶ In terms of chronology, there are two consecutive groups: Vatin and Vršac, the latter characterised by the use of white inlaid ornaments. This was the first time that settlements characteristic of the Vatin culture, such as those at Pančevo and Omoljica, were separated from other sites that were later to become part of the world of those who buried themselves in fields of funerary urns.

It is also at this stage of outlining the main problems of the Vatin culture that the interests of M. Garašanin can be associated.²⁷ Just like Grbić, M. Garašanin, based on typological criteria and in the absence of reliable stratigraphic relationships, defined two developmental stages. An

¹⁵ Nebehay 1981, 79–85, Abb. 4–7; Falkenstein 1998, 20.

¹⁶ Milleker 1905. See the complete reference list in Gogâltan 2022, 7, n. 16.

¹⁷ Miske 1909, 135–136, 143–144; Miske 1910, 150.

¹⁸ Schmidt 1924, 88.

¹⁹ Pârvan 1926, 303–304, 323, n. 4.

²⁰ Childe 1929, 287–290.

²¹ Dunăreanu-Vulpe 1930, 22–27.

²² Nestor 1933, 92, 100, 102–103, 110.

²³ Tompa 1937, 78.

²⁴ Berciu 1939, 102–103.

²⁵ Dumitrescu 1941, 127–128.

²⁶ Grbić 1956–1957. Bibliographic additions to Gogâltan 2022, 8, n. 32–37. See also Ljuština 2017.

²⁷ Гарашанин 1973, 319–336, 353; 392; Garašanin 1983, 505–519. Bibliographic additions to Gogâltan 2022, 8–9.

earlier one called Pančevo–Omoljica, and a later one called Vatin–Vršac. Over time, this internal chronology was accepted by other archaeologists.²⁸

In his doctoral thesis (1958), I. Bóna separately addressed Vatin and Verbicioara groups under the notion “Die Kultur der Kantharos-Keramik”.²⁹ For the first time, the burial urn fields were also correctly excluded from the Vatin finds.³⁰ In terms of internal development, sites such as Ljuljaci but also Vinča or Vatin represent an early stage in the development of the culture, referred to as “Vatin A”. The later phase would be divided into two sub-phases (B1 and B2), the latter being represented by the Pecica–Rovine hoard vessel.³¹

According to N. Tasić, the evolution of the Vatin culture would also follow two consecutive phases.³² Thus, the early phase was called Pančevo–Omoljica, and the late phase was defined as a “klassische Vattiner Gruppe”.³³ Tasić, as we have seen, brings up the so-called Crvenka–Cornești type finds as something new, separated from the Vatin culture and related to an alleged late presence of the Verbicioara culture in Banat.³⁴ This opinion was later shared by other Serbian specialists.³⁵ Romanian archaeologists did not agree with the fact that some sites in Serbian or Romanian Banat were considered part of the Verbicioara culture.³⁶ F. Gogâltan was of the opinion that if the scenario proposed by N. Tasić were to be accepted, we would have a Vatin culture in which the eponymous settlement would belong to another culture.³⁷

²⁸ Hänsel 1968, 134–141; Kovács 1972, 16, 24; D. Garašanin 1972, 37; Bankoff 1975, 18; Müller-Karpe 1980, 179–180; Vasić 2006, 449–452; etc.

²⁹ Bóna 1975, 179–189.

³⁰ Bóna rightly criticised specialists from Yugoslavia, Hungary, and Romania who have linked the Middle Bronze Age settlement at Vatin with the urn cemeteries at Vršac, Kubin, etc. (*Ibid.* 180).

³¹ *Ibid.* 181.

³² For N. Tasić's views on Vatin culture, see also Gogâltan 2022, 10–13.

³³ Tasić 1984c, 64.

³⁴ Subsequently (Tasić 2001, 315), without making too many comments, N. Tasić will accept the notion of Cornești–Crvenka as viewed by M. Gumă as a separate group belonging to the Vatin culture (Guma 1997, 47).

³⁵ Vukmanović & Popović 1986; Gačić 1987; Uzelac 1996, Map. 2; Jevtić & Vukmanović 1996, Map 1.

³⁶ Lazarovici 1977, 92; Gumă 1977, 84; Morintz 1978, 26, n. 45; Lazarovici & Săcărin 1979, 76–77, 80; Gumă 1997, 43, 47; Crăciunescu 2004, 153.

³⁷ Gogâltan 2004, 87–89; Gogâltan 2022, 11–12.

On the basis of the stratigraphy and typological analysis of Ljuljaci pottery, M. Bogdanović suggested a new classification for the Vatin culture of eastern Serbia. Thus it would develop in three phases: a “proto-Vatin” phase, consisting of the first stratigraphic sequence from Ljuljaci (Ljuljaci I); the Pančevo–Omoljica phase (Ljuljaci II); and the classical phase of the Vatin culture (Ljuljaci III).³⁸ Research of the Bronze Age in the Morava valley was continued by M. Stojić. By presenting more than seventy sites containing Vatin pottery, most of them without excavations, he concluded that it had evolved during six phases: Proto-Vatin I–II, and Vatin I–IV. Such an assumption, which even the author accepts with reservations, would be supported by the typological differences between pottery from different sites such as Lanište, Ostrikovac, Ostra, and Dobrača.³⁹

As we have seen, Romanian specialists linked several Banat pottery assemblages with those from Vatin quite early on. I. Nestor, in his 1960 synthesis on the *History of Romania*, is quite cautious in defining the Vatin culture. The “Vatin group” would be difficult to separate from the Periam–Pecica and Gârla Mare cultures, as it would have separated at some point from the first culture, and later contributed to the formation of the second. He points out that because of the cremation burial sites attributed to a late Vatin phase: “it is possible that the Vatin group is often confused with the Gârla Mare group”.⁴⁰ This has resulted in unfortunate names such as “Vatin–Gârla Mare culture”.⁴¹

These confusing and vague statements were due to the lack of up-to-date research on Middle Bronze Age sites in Romanian Banat. Excavations made in the following years in settlements such as Cornești,⁴² Gornea,⁴³ Liubcova,⁴⁴ or Moldova Veche,⁴⁵ led to a change of perspective on the so-called Vatin culture. While for S. Morintz there was still confusion between Vatin and Verbicioara assemblages,⁴⁶ G. Lazarovici di-

³⁸ Богдановић 1986, 69–70, 128–129; Bogdanović 1996.

³⁹ Stojić 1998, 81–104, with the older references.

⁴⁰ Nestor 1960, 108.

⁴¹ Berciu 1961, 141, 153, 156–157.

⁴² Radu 1972a; Radu 1972b; Soroceanu & Radu 1974.

⁴³ Lazarovici 1977, 90–93.

⁴⁴ Gumă 1977.

⁴⁵ Morintz 1978, 21, Fig. 5–6.

⁴⁶ Morintz 1978, 12–22. See Gogâltan 2022, 14.

vided the findings of the two cultures, setting the boundary between them in the Danube gap area.⁴⁷

Particularly relevant for the shaping of the Vatin culture was the excavation at Feudvar,⁴⁸ where more than 2.5 m of stratigraphy were carefully documented between 1986 and 1990. This enabled the identification of several phases in the evolution of this culture: an early Vatin culture; a classical phase; a sequence in which there is a so-called “Pančevo–Omoljica Style”; and a late Vatin horizon.⁴⁹ According to C. Ihde’s type-chronological analysis of the Vatin pottery from Feudvar, several ceramic groups within the Vatin culture can be outlined: a Syrmian–Slavonic group, a West-Serbian group, the Pančevo–Omoljica group, the Cornești–Crvenka group, and the Morava group.⁵⁰

Since 1995 the existence of two distinct contemporary ceramic groups in historical Banat has been proposed, both belonging to the Vatin cultural circle,⁵¹ a fact gradually accepted by more and more specialists.⁵² By presenting the results of older and more recent excavations at Vinča, Židovar, and other sites, M. Ljuština has also convincingly proved this reality.⁵³ Once again, the existence of the Pančevo–Omoljica group has been confirmed by the publication of older finds from the eponymous sites by N. Radojčić.⁵⁴

Chronological issues. Regarding the dating of the Vatin culture, opinions have been divided over time. B. Milleker initially placed the finds from Vatin in the Late Bronze Age, and its “flourishing” period in the “Hallstattian” period, specifically between the ninth and fifth centuries BC.⁵⁵ A similar approach was taken by V. Pârvan, even if Vršac and Vatin are: “the

⁴⁷ Lazarovici 1977, 90–93; Lazarovici & Săcărin 1979, 77–81.

⁴⁸ Hänsel & Medović 1991; Falkenstein 1998. See the complete reference list in Gogăltan 2022, 15, n. 97.

⁴⁹ Falkenstein, Hänsel & Medović 2016, 13–22.

⁵⁰ Ihde 2001, Abb. 2.

⁵¹ See Gogăltan 2022, 15–28 with the complete discussion and references.

⁵² See older references in Gogăltan 2022, note, 2, 221–223, 226, to which may be added Matiš 2008; Szentmiklosi & Tincu 2010; Jovanović et al. 2012; Balărie & Szentmiklosi 2016; Szentmiklosi 2021, 84, 140, 165; Gómez-Gras et al. 2021, 74, Fig. 1; etc.

⁵³ Ljuština 2010; Ljuština 2011; Ljuština 2013; Ljuština 2014; Ljuština 2015; Ljuština & Dmitrović 2015; Лјуштина 2022.

⁵⁴ Радочић 2013. See also Ljuština 2015.

⁵⁵ Milleker 1905, 67–68.

two great capitals of the Second Bronze Age culture”.⁵⁶ The “Villanova-type” urns from this and other sites show that Banat was: “between 1000 and 700 BC deeply and widely penetrated by Venetian–Ilyrian–Hallstattian elements”.⁵⁷ V. Gordon Childe ascribed several burial and cremation graves at Vatin to the B phase of the “Hungarian” Bronze Age (1600–1450 BC),⁵⁸ its final evolution crossing the Late Bronze Age and ending at least somewhere between 1100 and 800 BC.⁵⁹ According to I. Nestor, the connections between the “Vattina–Verșeț” group, and the Ottomani culture, make it possible that the “Vattina–Verșeț” group appeared as early as the Aunjetiz culture.⁶⁰ Nestor expresses serious reservations about the existence of a “spät Vattina-Kultur” as defined by Childe.⁶¹

Following the Second World War, specialists – especially from Serbia, such as M. Grbić,⁶² N. Tasić,⁶³ M. Bogdanović,⁶⁴ J. Uzelac,⁶⁵ M. Stojić,⁶⁶ and others – attributed much of the evolution of the Vatin culture to the Early Bronze Age.⁶⁷ This has not been accepted by other researchers from the former Yugoslavia, such as M. Garašanin,⁶⁸ D. Garašanin,⁶⁹ N. Majnarić-Pandžić,⁷⁰ M. Zotović,⁷¹ or those from Hungary,⁷² or, in fact, by most archaeologists in Romania. Specialists such as I. Nestor,⁷³

⁵⁶ Pârvan 1926, 304.

⁵⁷ *Ibid.* 305.

⁵⁸ Childe 1929, 266.

⁵⁹ *Ibid.* 380, 386.

⁶⁰ Nestor 1933, 92.

⁶¹ *Ibid.* 110.

⁶² Grbić 1956–1957, 38.

⁶³ Tasić 1973, 25; Tasić 1974a, 220–223; Tasić 1974b, 199; Tasić 1977, 17; Tasić 1981, 205; Tasić 1983, 73–74, 152; Tasić 1984a, 12; Tasić 1984c, 74; Tasić 1988b, 64, fig. 3; Tasić 1989, 89; Tasić 1991, 14; Tasić 1997a, 82–83; Tasić 1998, 34–35.

⁶⁴ Богдановић 1986, 69–73, 125–131.

⁶⁵ Uzelac 1996, 24.

⁶⁶ Stojić 1998, 87.

⁶⁷ See also Teržan 2013, 840–841.

⁶⁸ Гарашанин 1973, 334–335; Garašanin 1983, 506.

⁶⁹ D. Garašanin 1967, 205–206; D. Garašanin 1972, 36–37.

⁷⁰ Majnarić-Pandžić 1984, 63–90; Majnarić-Pandžić 1994, 66–80.

⁷¹ Zotović 1985, 46.

⁷² Bóna 1975, 186; Bóna 1992, 32. More recently Fischl et al. 2013, Fig. 2.

⁷³ Nestor 1960, 108.

D. Berciu,⁷⁴ D. Popescu,⁷⁵ K. Horedt,⁷⁶ T. Soroceanu,⁷⁷ G. Lazarovici,⁷⁸ S. Morintz,⁷⁹ M. Petrescu-Dîmbovița,⁸⁰ V. Dumitrescu,⁸¹ M. Gumă,⁸² A. Vulpe,⁸³ N. Boroffka,⁸⁴ and others, associate the onset and evolution of the Vatin culture with the Middle Bronze Age.

In our opinion, the Cornești–Crvenka group is a typical Middle Bronze Age phenomenon that spreads from the extreme central–eastern part of Serbian Banat, Romanian Banat, and southern Crișana (Fig. 1). In terms of relative chronology, the phenomenon can be placed in what is defined as the Middle Bronze I–III, thus contemporary with the BA periods A1–B1 in Central Europe. From an absolute dating viewpoint, the Middle Bronze Age would begin after 2000, and end between 1600 and 1500 BC.⁸⁵ Recently, these chronological opinions have also been shared by D. B. Jovanović⁸⁶ and M. Ljuština.⁸⁷

The distribution area. Overall, most of those who have addressed the issue of the geographical distribution of the Vatin culture refer to the same area.⁸⁸ M. Grbić, therefore, attributed this phenomenon to present-day Banat, parts of Serbia, Slavonia, and Bosnia.⁸⁹ I. Bóna would point out that the “Vatin population”, at least in the early periods, did not spread beyond the Aranca and Mureș rivers to the north-west and north, and the Danube and Tisa rivers to the west. Southwards the border

⁷⁴ Berciu 1966, 177–182. According to the author, the “Vattina-Gîrla Mare complex” would have developed throughout the Middle and Late Bronze Age, even going through “that process of hallstattization”.

⁷⁵ Popescu 1966, 560.

⁷⁶ Horedt 1967, 6.

⁷⁷ Soroceanu & Radu 1975, 33.

⁷⁸ Lazarovici 1977, 90–94; Lazarovici & Săcărin 1979, 76.

⁷⁹ Morintz 1978, 22.

⁸⁰ Petrescu-Dîmbovița 1978, 83, 86. The “Vatina-Gîrla Mare” culture would also survive into the Late Bronze Age.

⁸¹ Dumitrescu, Bolomey & Mogoșanu 1983, 192–193.

⁸² Gumă 1997, 42–47.

⁸³ Vulpe 2001, 265.

⁸⁴ Boroffka 2013, 879, Fig. 47.2

⁸⁵ Gogâltan 2004, 81–82, Fig. 1; Gogâltan 2022, 5–6, Fig. 1. More recently Lehmpful et al. 2019, Fig. 16; Stavilă, Hegy & Craiovan 2020; Sava & Gogâltan 2022, 89, Fig. 2.

⁸⁶ Јовановић 2020, Tab 2.

⁸⁷ Љуштина 2022, 15–25. See also Gómez-Gras et al. 2021.

⁸⁸ See also Bóna 1992, 17; Vasić 2006, Fig. 1; Gómez-Gras et al. 2021, 74, Fig. 1.

⁸⁹ Grbić 1956–1957, 38, Abb. 4.

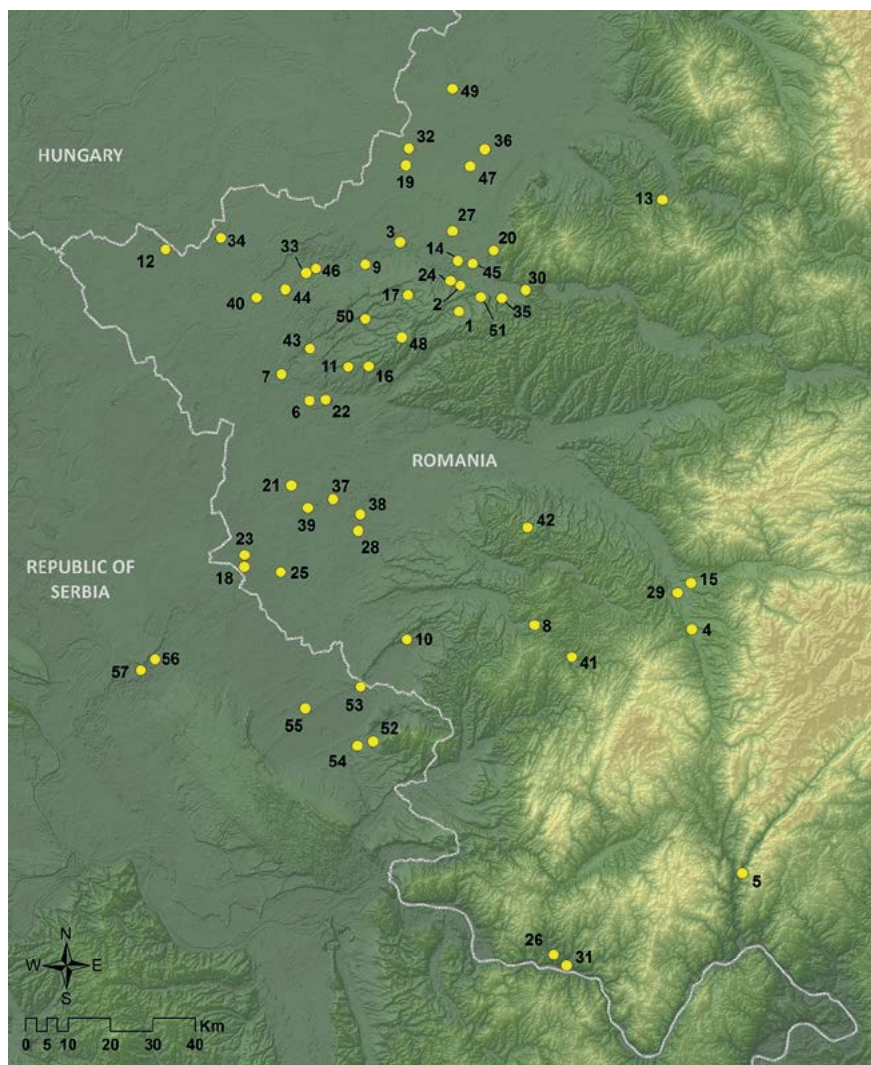


Fig. 1. The site of the Cornești-Crvenka group/ceramic style: **1. Alioș:** Valea Alioșu, Valea Afundă; **2. Aluniș:** Dealul Molizilor; **3. Arad:** Gai, Grădiște-I.A.S. Sere, Uzina de Apă, Bufniți 1, Bufniți 3; **4. Balta Sărată:** Câmpul lui Andrei, Dealul Zlăgănița/Sat Bătrân; **5. Băile Herculane:** Peștera Oilor; **6. Becicherecul Mic:** Dealul Crucii, La Cazemate; **7. Biled:** Valea Ierului; **8. Bocșa Vasiovei:** Muntele Areniș/Izvorul Smidei/Gruniul Cetății; **9. Bodroglul Nou:** Către Vale; **10. Butin;** **11. Carani;** **12. Cenad:** Biserica Romano-Catolică; **13. Chișindia:** Podu Vechi; **14. Cicir:** Spinul lui Stanca; **15. Ciuta:** Cornu Dealului; **16. Cornești:** Pustă/Rātu cu Peri, Incinta II Sud-Est, Dealul Cornet; **17. Cruce-**

ni: Pe drumul dintre Șagu și Cruceni; **18. Cruceni:** La sondă; **19. Curtici:** Cârci-
uma lui Vásárhely; **20. Cuvin:** Valea Danciului; **21. Diniaș:** Gomila/ Lângă Fe-
hérház; Imelca; **22. Dudeștii Noi:** La Canton; **23. Foeni:** Gomila Lupului,
Groapa de Cărmizi, Sălaș; **24. Frumușeni:** 2,5 km sud de sat; **25. Gad:** 3 km
sud de sat; **26. Gornea:** Liubcova de Sus/Pod Păzăriște; **27. Horia:** Slatini; **28.**
Jebel; **29. Jupa:** Dincolo de triaj; **30. Lipova:** Băi; **31. Liubcova:** Stenca; **32. Ma-**
cea: Topila; **33. Munar:** Reichtberg/Wolfsberg; Situl 1; **34. Nădlac;** **35. Neu-**
dorf: Pârâul Roșia; **36. Olari:** Holumb; **37. Parța:** Tellul II = Parța Vest; **38.**
Pădureni: Pusta Mică; **39. Peciu Nou:** Stietzel, Irigat; **40. Periam:** Movila
Șanțului; **41. Reșița;** **42. Sacoșu Mare:** Dâmbu lui Piciu; **43. Satchinez:** Obiec-
tiv 3, Râtu Mare; **44. Satu Mare:** Weingarten; **45. Sâmbăteni:** Est; **46. Sânpet-**
ru German: Fântâna Vacilor, Malul Înalt; **47. Sântana:** La nord de sat; **48. Se-**
ceani: Dealu Secean; **49. Socodor:** Căvăjdia; **50. Vinga:** Izvor; Situl 19; **51.**
Zăbrani: Cocoașa Pietrei; **52. Vrșac:** Crvenka; **53. Vatin:** Bela Bara; **54. Pavliš:**
Beluca; **55. Barice:** Bugarska humka; **56. Tomaševac;** **57. Orlovat:** Podumka.

would be somewhere on the Danube, and eastwards on the line of Bela Crkva and Arad.⁹⁰ As information on the Vatin culture became increas-
ingly available, M. Garašanin determined the following “borders”: Roma-
nian Banat, with the settlements of Foeni and Cornești, but not beyond
the Mureș river to the north, and the Iron Gates (Ostrovul Moldova) to
the east, Bačka, Srem, eastern Slavonia, and south-west to the left bank
of the Drina.⁹¹ The area between Oltenia to the east, Fruška Gora to the
west, Ljuljaci and Svetozarevo to the south, and southern Bačka to the
north, is the area where this culture spread, as proposed by N. Tasić.⁹²

Recent surveys have pushed the northern boundary of the Corneș-
ti–Crvenka group as far as the Crișul Repede,⁹³ as can be seen from the
map of the spread of this ceramic style (Fig. 1). The southern and
south-eastern areas were also modified.⁹⁴ Recent excavations at Trnjane

⁹⁰ Bóna 1975, 180.

⁹¹ Garašanin 1983, 511, map 14.

⁹² Tasić 1984c, 60.

⁹³ Gogăltan 2022, 16, 27, with older references; Sava & Gogăltan 2022, Fig. 31.

⁹⁴ Ljuština & Dmitrović 2015; Лyштина 2022, 135.

in north-eastern Serbia have allowed the dating of the Bubanj–Hum IV–Ljuljaci group of the Vatin culture to the Middle Bronze Age, ca. 1900–1600 BC.⁹⁵

The origins. Scholarly opinions concerning the origin of the Vatin culture have been shaped by the extent and depth of archaeological research. On the basis of the fact that this culture occupies the present-day territory of Banat and partly of Serbia, Slavonia, and Bosnia, M. Grbić concluded that this cultural manifestation was not of Pannonian origin, as M. Wosinsky,⁹⁶ M. Hoernes, and O. Menghin,⁹⁷ or M. M. Vasić⁹⁸ have stated previously, but an Illyrian one.⁹⁹ Therefore its origin should not be sought in the Middle Danube, but in the mountains west of the Morava and Vardar rivers. The Vatin culture would have developed there spontaneously from the ancient Neolithic local background, sometime between 2500 and 2000 BC. However, a number of pots also demonstrate connections with the Balkans, specifically with the so-called Armenochori horizon in western Macedonia.¹⁰⁰

M. Garašanin also argued for a local origin. Thus the Vatin culture originates from the cultures of the area, to which would be added a number of steppe, Aegean, and Anatolian elements.¹⁰¹ Like other cultures such as Verbicioara, Tei, or Monteoru, it would have developed in the Early Bronze Age. Due to the temporal discrepancy, the origin of the Vatin culture may not be the Vinkovci culture but, as S. Morintz has also stated, the Mureş culture.¹⁰²

Several pots from Ljuljaci, attributed to a so-called “Prevatin Stufe”, are, according to I. Bóna, evidence of a new wave of southern migration.¹⁰³ Like the related groups, this “population” originates from the cultural realities of the Copper and Early Bronze Ages in the Eastern Balkans. The Balkan cultures were in turn influenced by the rise of new communities in Asia Minor. However, the Glina III and Periam substra-

⁹⁵ Kapuran, Gavranović & Mehofer 2020, with older references.

⁹⁶ Wosinsky 1904, 63.

⁹⁷ Hoernes & Menghin 1925, 404–405, 407.

⁹⁸ Васић 1936, 135–136.

⁹⁹ V. Trbuhović also mentions a “Vojvođansko-panonska” group (Trbuhović 1968, 62–71).

¹⁰⁰ Grbić 1956–1957, 37–38.

¹⁰¹ Гарашанин 1973, 335.

¹⁰² Garašanin 1983, 519.

¹⁰³ Bóna 1975, 181.

tum also contributed to the development of the Vatin culture, in addition to certain influences from Transylvania and the Tisza area.¹⁰⁴

Starting again from the Ljuljaci assemblage, N. Tasić will turn to M. Grbić's earlier opinion that a "Vorvatiner Stil" was born in Šumadija. The underlying background of this early phase of the Vatin culture is difficult to specify. Following the Eneolithic cultures of Kostolac and Vučedol, the Vinkovci culture was present in the area at the beginning of the Early Bronze Age. However, a "Post-Bubanj" evolution should not be ruled out, though it is not specified what it consists of.¹⁰⁵

D. Berciu has put forward a new name for the Early Bronze Age cultures of western Romanian and Serbian Banat: the "Periam–Mokrin–Pančevo" complex or horizon. This background would have constituted the foundation on which three representative Middle and Late Bronze Age cultures developed: Vatin–Gârla Mare, Pecica, and Verbicioara.¹⁰⁶ According to M. Petrescu-Dîmbovița, the "Periam culture" is the one that gave rise to the Middle and Late Bronze Age cultures such as: "the Vatin–Gârla Mare, Pecica, and Verbicioara cultures of south-western Romania".¹⁰⁷ V. Dumitrescu considered that the Vatin culture: "was formed on the background of the Periam–Mokrin–Pančevo complex", thus using an older name proposed by D. Berciu.¹⁰⁸

P. Roman on various occasions drew attention to a late Early Bronze Age tradition in which pottery was decorated with broomsticks. The development of that "Textilmusterkeramik", well documented in western Romania and Oltenia, should also be associated with this tradition. Similar ornaments are to be found later in the early phases of the Ottomani, Vatin, and Verbicioara cultures.¹⁰⁹ The Mureș culture, whose area it partially overlaps, and the: "repeated pulsations from the south or from another direction", are thought by M. Rotea to be at the origin of the Vatin culture.¹¹⁰

Based on the excavations carried out at several Early Bronze Age settlements in Banat (Fig. 2), the study of older assemblages from Corneș-

¹⁰⁴ Bóna 1975.

¹⁰⁵ Tasić 1984c, 73–74.

¹⁰⁶ Berciu 1961, 157; Berciu 1966, 168.

¹⁰⁷ Petrescu-Dîmbovița 1978, 83, 86.

¹⁰⁸ Dumitrescu, Bolomey & Mogoșanu 1983, 192–193.

¹⁰⁹ Roman 1988, 219–223.

¹¹⁰ Rotea 1995, 263, 265.

ti (Fig. 3), Gornea (Fig. 4), Ciuta (Fig. 5), and Socodor (Fig. 6), or the excavations at Foeni “Gomila lupului I” (Fig. 7),¹¹¹ the origins of the Cornești–Crvenka group were sought in the so-called Gornea–Orlești finds. A. Vulpe, in his synthesis of the Middle Bronze Age on the present territory of Romania, agrees with the new hypotheses put forward concerning the origin of the Cornești–Crvenka group.¹¹² Thus, those sites in which ceramics decorated with striations and “textile” or “honeycomb” impressions prevail, contributed to the formation of the Vatin culture in Vojvodina and Banat.¹¹³

This shared cultural background, generically referred to as the “horizon with Besenstrich und Textilmuster ceramic”,¹¹⁴ of the late Early Bronze Age, explains the many common elements in the ceramics of the Cornești–Crvenka group/style, and the Verbicioara culture. That is why at the time N. Tasić defined those *Funde vom Typ Crvenka-Cornești* he genetically linked them to the Verbicioara culture. Today, however, we benefit from further information that allows us to rectify this forty-year-old hypothesis.

The existence of Middle Bronze Age regional groups, which were included in the Vatin cultural circle, can be explained by the background on which they were formed in a diverse geographical area stretching from the Danube to the Timok valley, and from the West Morava river to the Crișul Alb river.

¹¹¹ Older references to Gogâltan 2022, 27.

¹¹² Gogâltan 1996, 46; Gumă 1997, 46.

¹¹³ Vulpe 2001, 265.

¹¹⁴ Gogâltan & Stăvilă 2021.

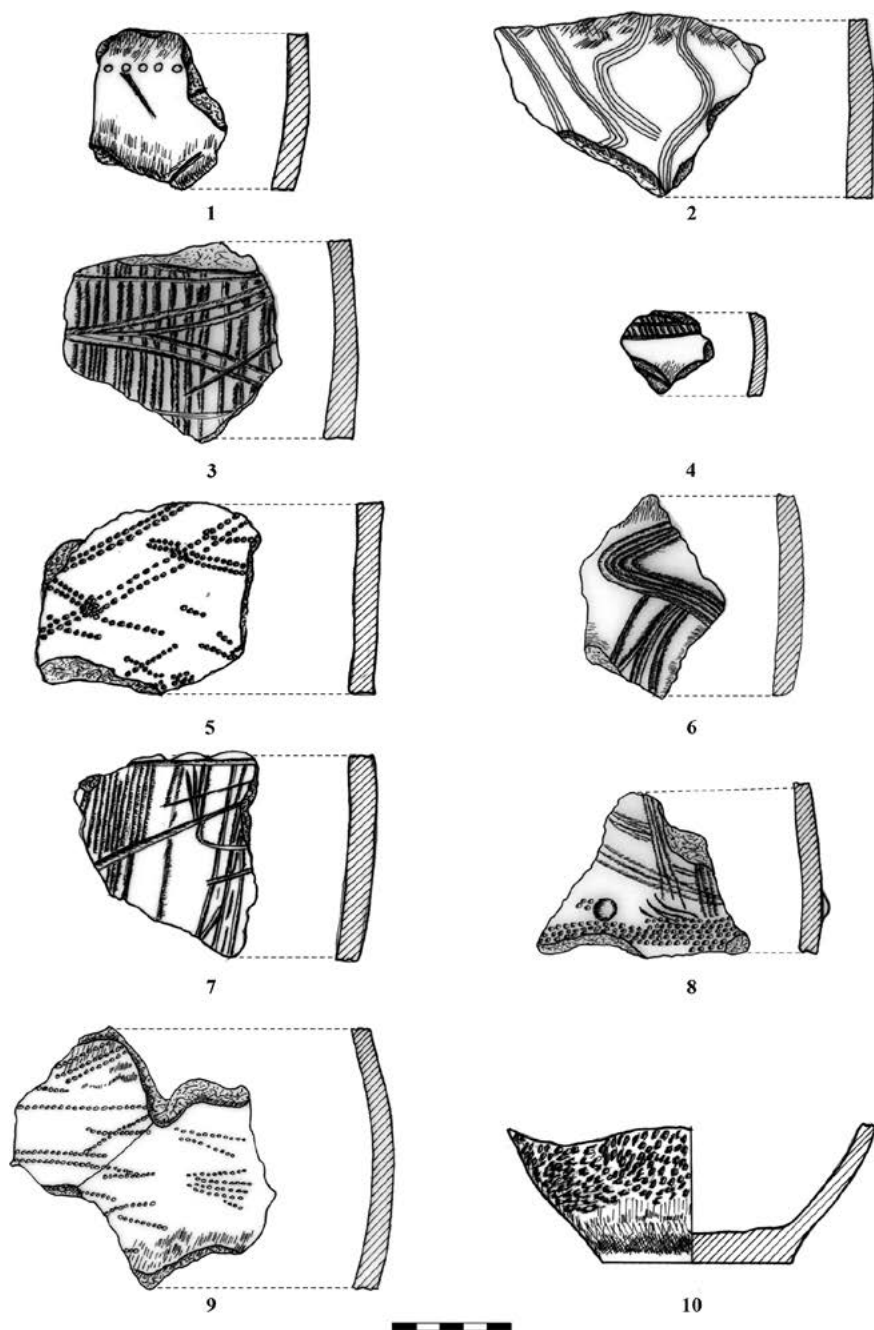


Fig. 2. Foeni-Cimitirul ortodox., „Horizon with *Besenstrich* und *Textilmuster* ceramic”.

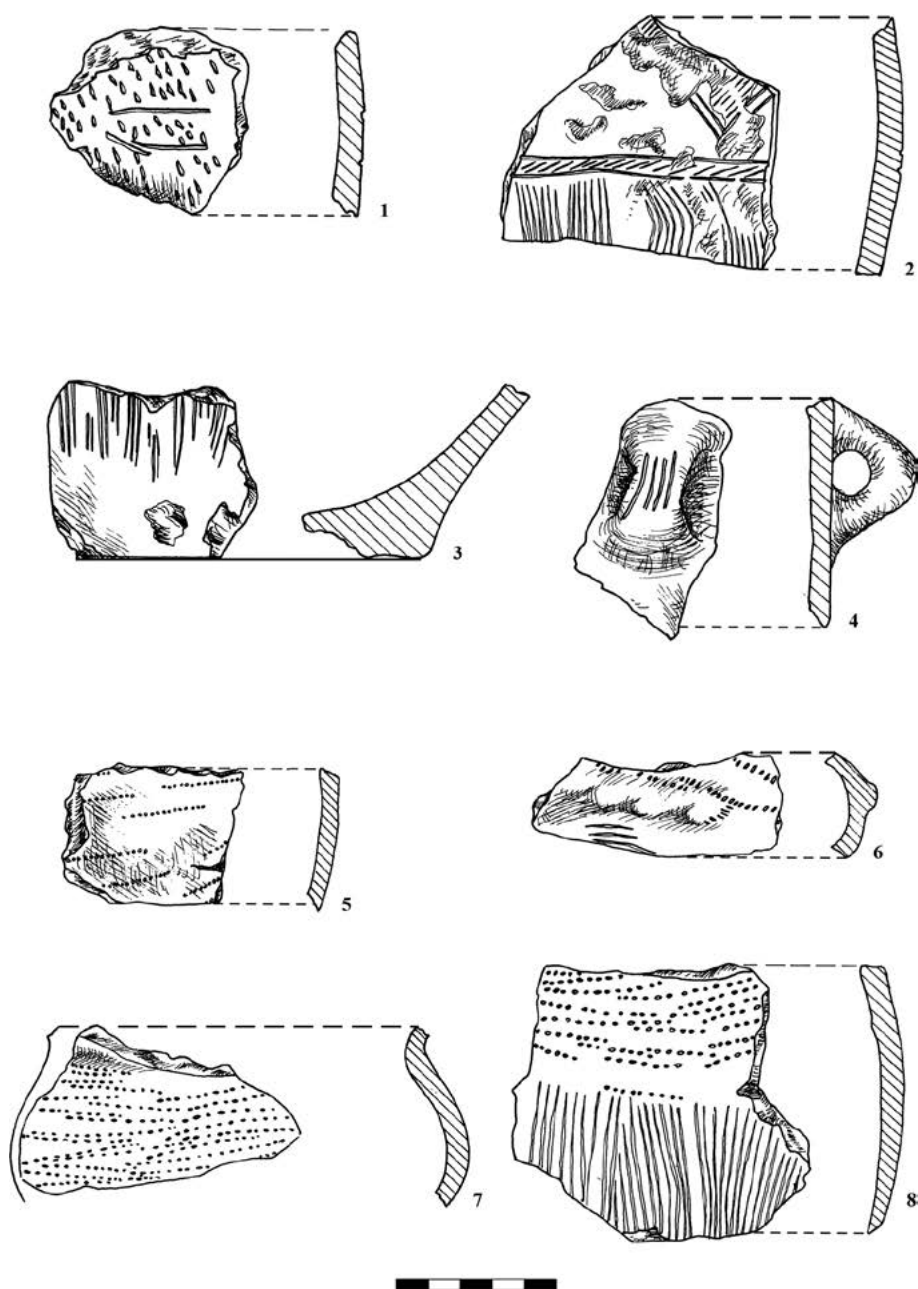


Fig. 3. Cornești-Dealul Cornet. Cornești-Crvenka ceramic.

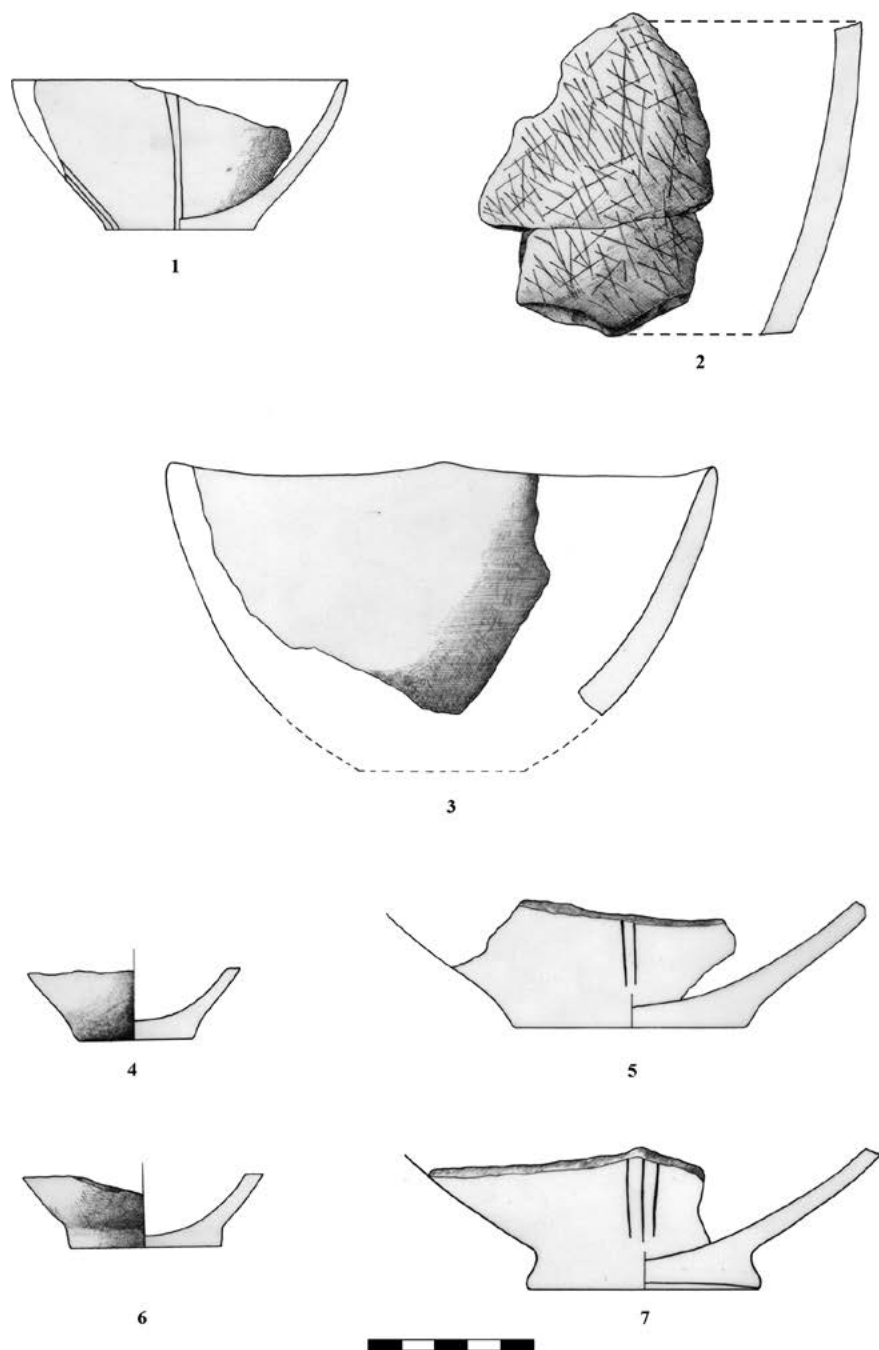


Fig. 4. Gornea-Liubcova de Sus/Pod Păzăriște. Cornești-Crvenka ceramic.

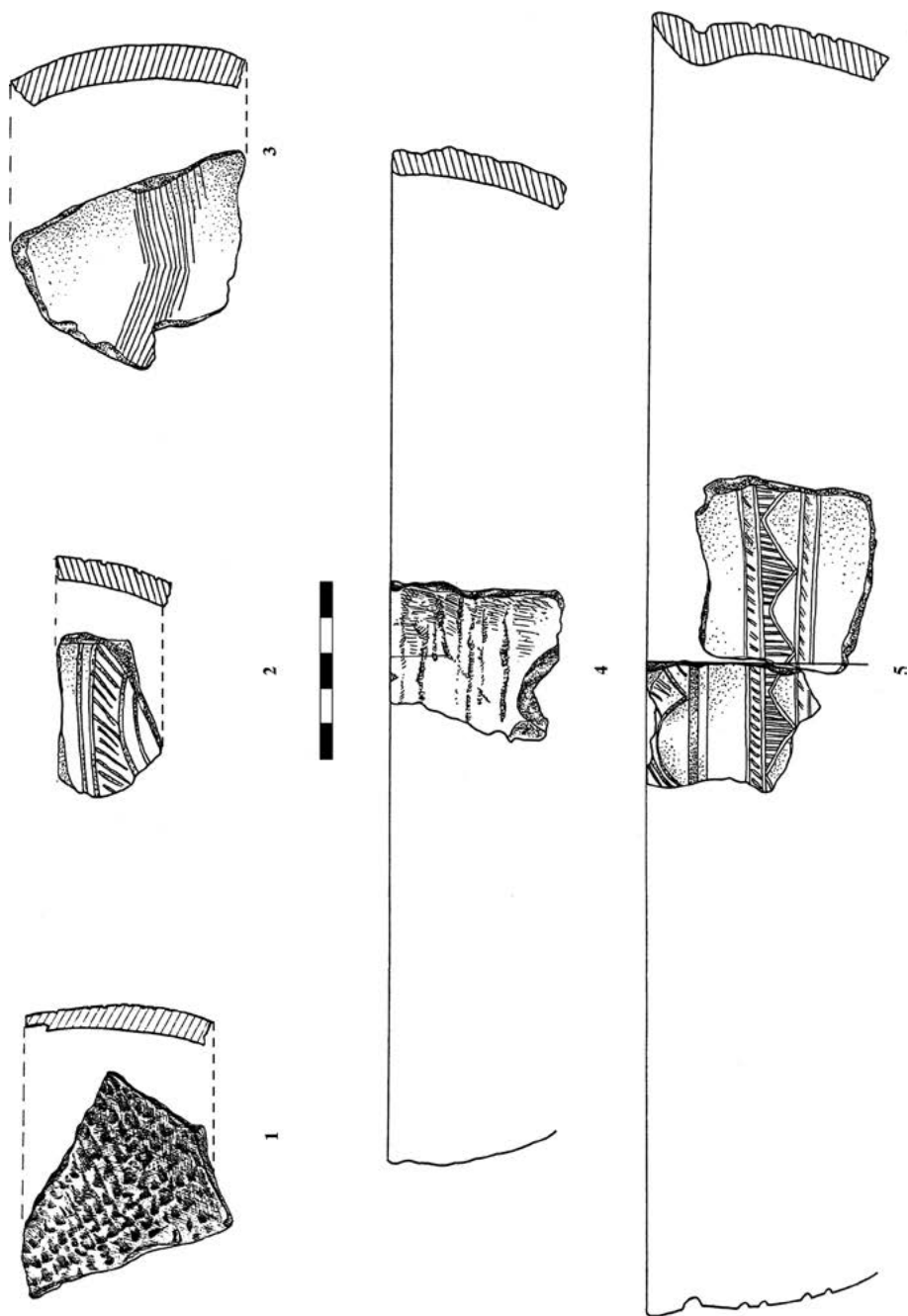


Fig. 5. Ciuta-Cornu Dealului. Cornești-Crvenka ceramic.

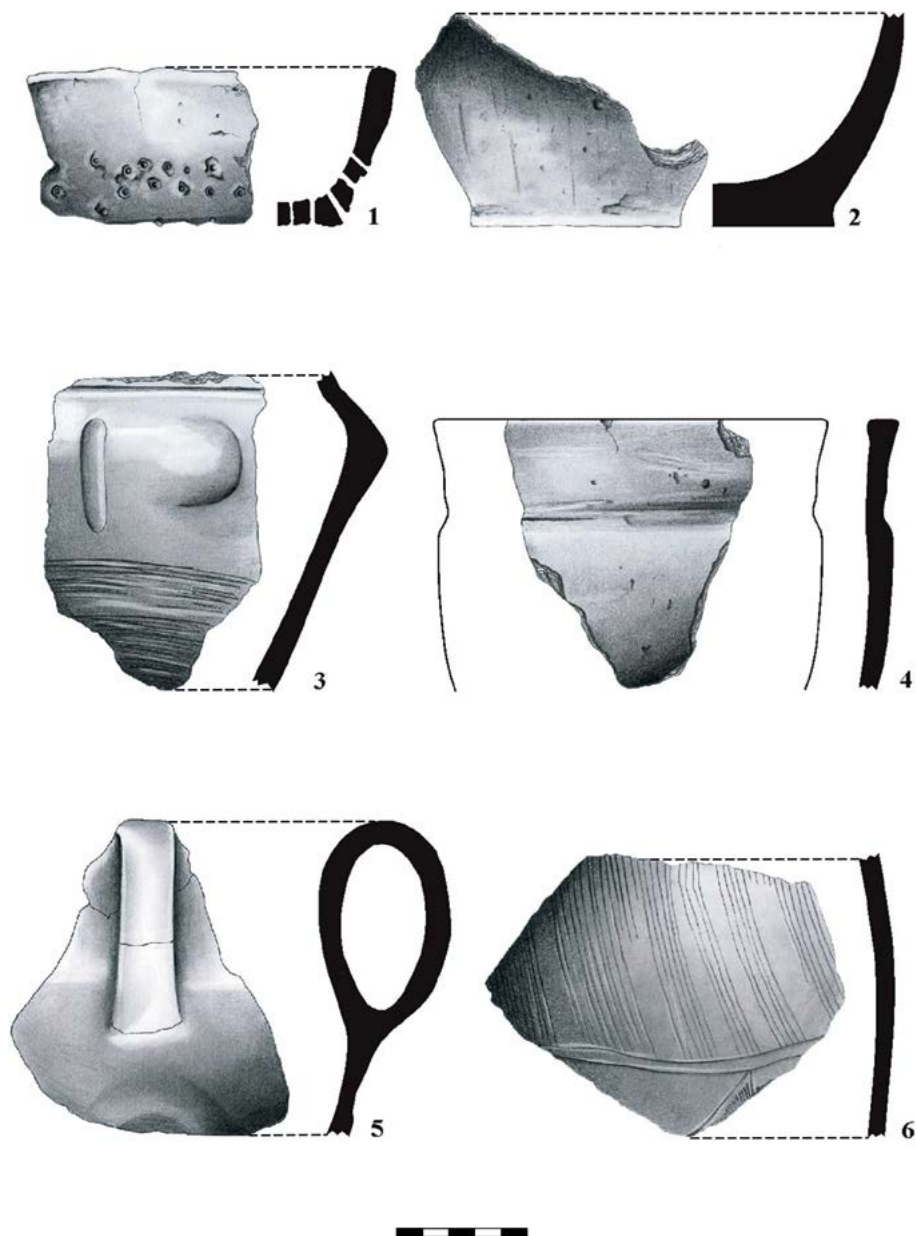


Fig. 6. Socodor-Căvăjdia. Cornești-Crvenka ceramic.

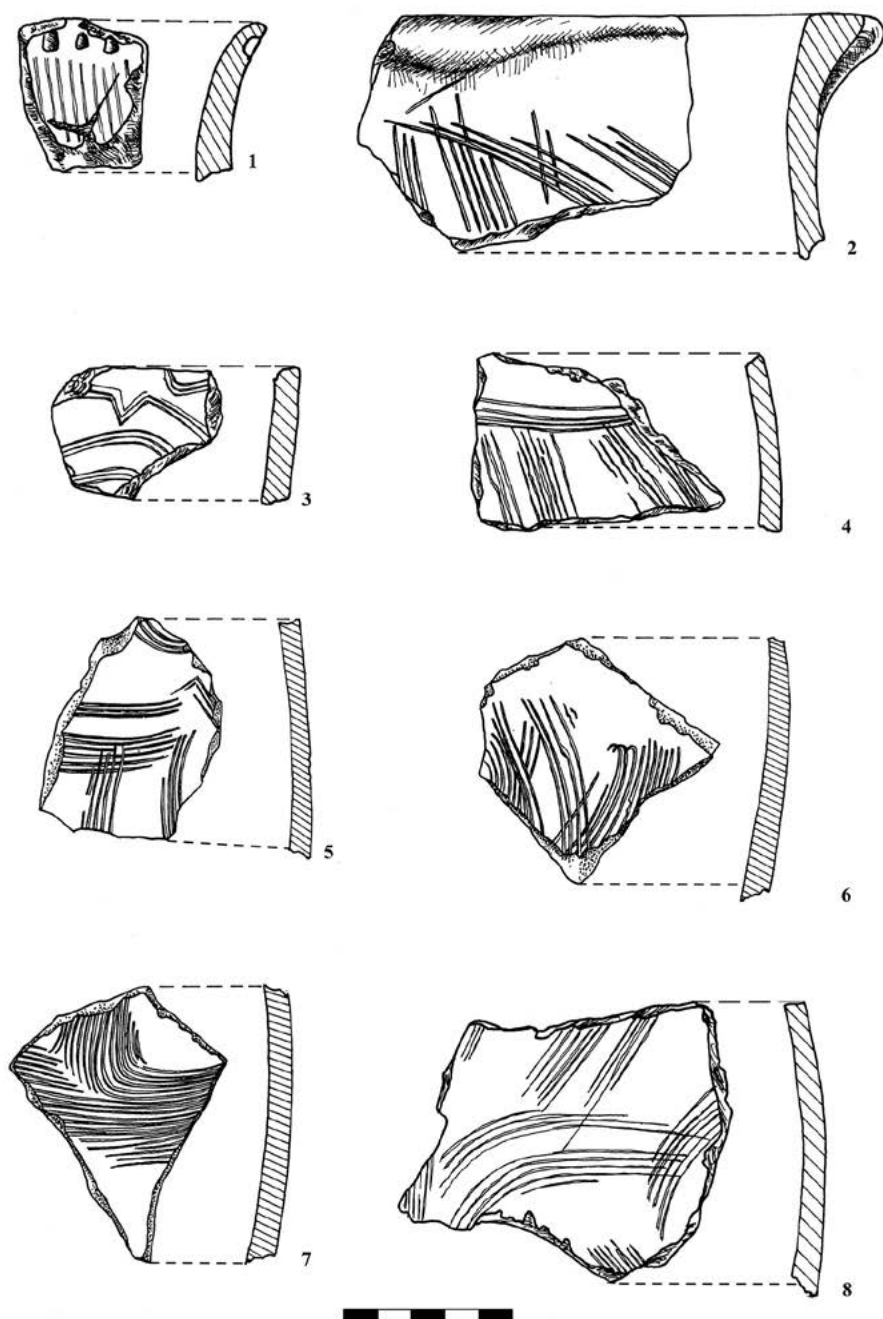


Fig. 7. Foeni-Gomila lupului I. Cornești- Crvenka ceramic.

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Anđelka Putica*

Sombor City Museum

Sombor, Serbia

The swords of the Sombor–Smolenice type: function and meaning

Abstract: The goal of this paper is to offer, apart from a typological and contextual approach to, and aspects of use, a fresh look at one of the most interesting types of Middle Bronze Age swords. Attention is drawn once more to a small group of exquisite finds, the Sombor–Smolenice type swords which were decisive in the development of the flange-hilted swords (*Griffzungenschwerter*). This kind of weapon had a remarkable role in the Tumulus culture and its origin can be dated back to the Middle Bronze Age (BrB₂). The Sombor–Smolenice type swords are clearly distinguished from the other sword shapes of the period by their rudimentary tang, representing the earliest swords with a tang for attaching the hilt in extra-Aegean South-eastern and Central Europe. The geographical distribution of finds shows a scattered pattern, from Romania, Serbia (Vojvodina), Hungary, and Slovakia to northern Italy and Germany (lower Bavaria), suggesting certain communication routes. Traces of manufacture and subsequent treatment observable on bronze artefacts provide important information about their origin and manufacturing techniques. This paper is not limited to the use of this type of swords as a weapon but it also takes into account their other functions, association with other weapons and social role.

Keywords: flange-hilted swords, Tumulus culture, use-wear analysis, warrior graves

Introduction

The large group of flange-hilted swords (*Griffzungenschwerter*) has been a focus of attention and debate since the early 1900s when it was defined by E. Sprockhoff.¹ Views on their origin, based on typologi-

* anputica@gmail.com

¹ Sprockhoff 1931, 8.

cal features, diverge, either arguing for Greek influences² or interpreting them as descendants of the earlier Carpathian swords of the Sombor–Smolenice type.³ A small group of Sombor–Smolenice swords – the type central to the development of the *Sprockhoff Ia* flange-hilted sword⁴ – comprising three pieces: Sombor, Smolenice, and Bela Crkva, was first set apart by G. Kossina.⁵ There followed debates about their origin, chronological position and distribution, using different terms for the type: Povegliano 2–Joševa group or type;⁶ Sombor and Smolenice groups;⁷ Smolenice and Sombor types;⁸ Sombor–Smolenice type;⁹ Sombor–Smolenice group;¹⁰ A-Povegliano type;¹¹ Smolenice shape;¹² Sombor/Smolenice type.¹³ Harding¹⁴ singles out the Sombor group – including in it the finds from the former Yugoslavia (Sombor, Bački Vinogradi, Bela Crkva, and Vrhnika) – from the heterogeneous Smolenice group, with a remark that the Sombor group shows little similarity to the finds from Austria, Hungary, and Romania. Contrary to Harding, Sicherl¹⁵ finds them closely related and classifies them as belonging to a distinct Sombor–Smolenice group with variants. Although the group is not uniform, its basic features are recognisable and Bader's¹⁶ suggestion that it is a single type with several subtypes is more than acceptable from the present perspective. This is substantiated by the wide distribution of finds from Romania (Orșova) in the east, via Vojvodina (Hajdukovo–Bački Vinogradi, Šaponje Salaši near Sombor, and Bela Crkva) and Slovenia (Vrhnika), to northern Italy (Povegliano) and Austria (Winklarn and Limburg) in the west, to Hungary (Bodrogkeresztúr) and Slovakia in the north (Smolenice),

² Müller-Karpe 1962, 262.

³ Hänsel 1968; Cowen 1966, 295

⁴ Harding 1995, 24

⁵ Kossina 1912, 284.

⁶ Nestor 1937, 202; Gabrovec 1966, 441.

⁷ Cowen 1966, 295–301.

⁸ Hänsel 1968, 175.

⁹ Bianco-Peroni 1970, 50.

¹⁰ Schauer 1971, 98 and Schauer 1972, 39.

¹¹ Peroni 1963, 76.

¹² Novak 1975, 14.

¹³ Bader 1991, 65–67.

¹⁴ Harding 1995, 24.

¹⁵ Sicherl 2004, 27–29.

¹⁶ Bader 1991, 65.

and as far as Bavaria with an isolated find (Fig. 1). Some minor differences in shape and narrower dating put aside, all of them constitute a typologically distinctive group in relation to the Late Bronze Age flange-hilted swords with differently shaped blades. In this overview of Sombor-Smolenice swords, the aspects of their use and significance will be approached using the finds from Vojvodina – Šaponje Salaši, Hajdukovo-Bački Vinogradi, and Bela Crkva. All three swords are chance finds and there is no clear information about the circumstances of their discovery. Attention will be paid to the terms for the main features and the dates of the individual swords distributed over a wider geographical area that are relevant to the context of this paper.

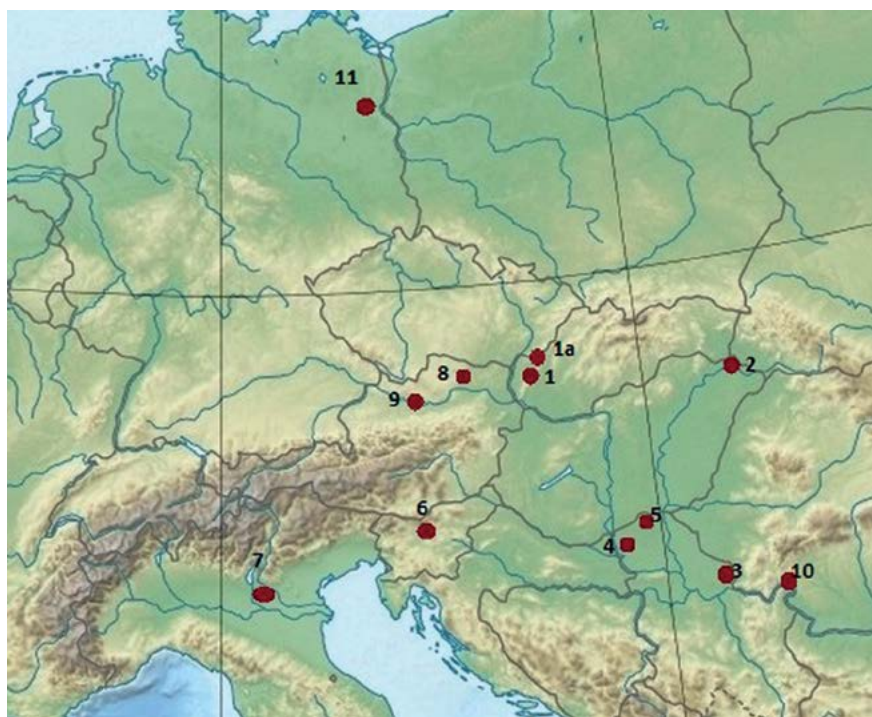


Fig. 1 Distribution map of Sombor-Smolenice type swords: 1: 1a) Smolenice; 2) Bodrogkeresztúr; 3) Bela Crkva; 4) Šaponje Salaši, Sombor; 5) Hajdukovo-Bački Vinogradi; 6) Vrhnika; 7) Povegliano; 8) Winklarn; 9) Limberg; 10) Orşova; 11) Berlin (modified compared to Gabrovec 1966).

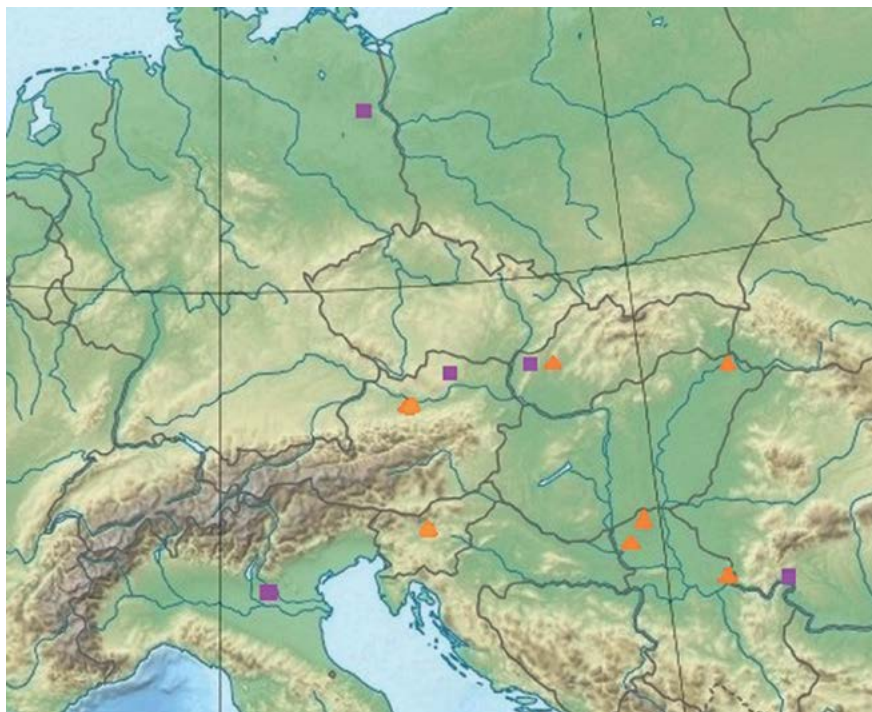


Fig. 2 Purple □ Smolenice type swords; orange Δ Sombor type swords (classification after Cowen 1966; Bader 1991; Sichterl 2004).

Shape analysis

Sombor–Smolenice swords may be clearly identified based on their morphological features. The classification of the finds presented here (Fig. 2) is based on the division proposed by J. D. Cowen.¹⁷ Cowen's classification may be seen as seminal given that it has been followed by almost all authors and regional research projects, albeit using somewhat different and frequently local names.¹⁸ Based on the shape of the hilt and blade, Cow-

¹⁷ Cowen 1966, 296–298, Pl. XXI.

¹⁸ Sichterl 2004, 28, 29 divides the Sombor–Smolenice group into the Sombor type (Bodrogkeresztúr, Vrhnika, Sombor, Hajdukovo, Bela Crkva, Smolenice cat. 775) and the Smolenice type (Smolenice cat. 776, Winklarn, Berlin). Bader 1991; Harding 1995; Sichterl 2004.

en¹⁹ divides them into the Sombor group – with a flat tang, and the Smolenice group – with a flanged tang. Sombor–Smolenice swords (Fig. 3) are characterised by a short, straight, thin and flat tang with or without flanges, which gradually widens into shoulders. The trapeziform grip, considerably wider than the blade, has six holes for rivets (two on the tang and two on either shoulder). The blade which slightly widens and then steadily tapers to a tip frequently resembles a rapier blade.²⁰ It has a markedly rounded, slightly serrated leaf-shaped midrib which extends inside the hilt, it is lenticular- or diamond-sectioned, and 33 cm to 57 cm long.²¹ The swords are plain and depending on whether the tang is flanged or not, Bader²² distinguishes two main variants: Sombor and Orşova, with a few subvariants according to the cross-section of the blade and the number of rivets.²³ Their undoubtedly main and recognisable feature is a rudimentary tang which played a decisive role in the evolution of 1A and 1B flange-hilted swords via the Smolenice type.²⁴ The blade presumably descends from Sauerbrunn daggers and short swords.²⁵ Undeveloped edges of the tang make the hilt particularly fragile and it seems therefore that these early swords were the result of experimentation with new ways of attaching the hilt.²⁶ As a technical innovation, the tang probably arose concurrently in different regions, as it had been known in the eastern Mediterranean before the classical phase of the Tumulus culture in Central Europe, which was characterised by the use of the sword.²⁷ Cultural contacts between the Aegean and Carpathian regions facilitated a quick adoption of southern achievements in Eastern and Central Europe, while the swords from Slovenia and Sombor clearly suggest that the Danube area was also influenced by eastern Central European and Aegean work-

¹⁹ Cowen 1996, 308, 309.

²⁰ Schauer 1971, 98.

²¹ Bader 1991, 65; Harding 1995, 24.

²² Bader 1991, 66.

²³ The Sombor variant (unflanged tang, lenticular-sectioned blade) – Sombor and Hajdukovo (Vojvodina), Bodrogkeresztúr (Hungary) and Vrhnika (Slovenia); the Orşova variant (flanged tang, lenticular-, lozenge-sectioned blade) – Smolenice necropolis (Slovakia), Povegliano (Italy), and Orşova (Romania).

²⁴ Cowen 1966, 295, 296; Harding 1995, 24.

²⁵ Harding 1995, 24.

²⁶ *Ibid.*

²⁷ Schulz 2006; Harding 2007, 71–77.

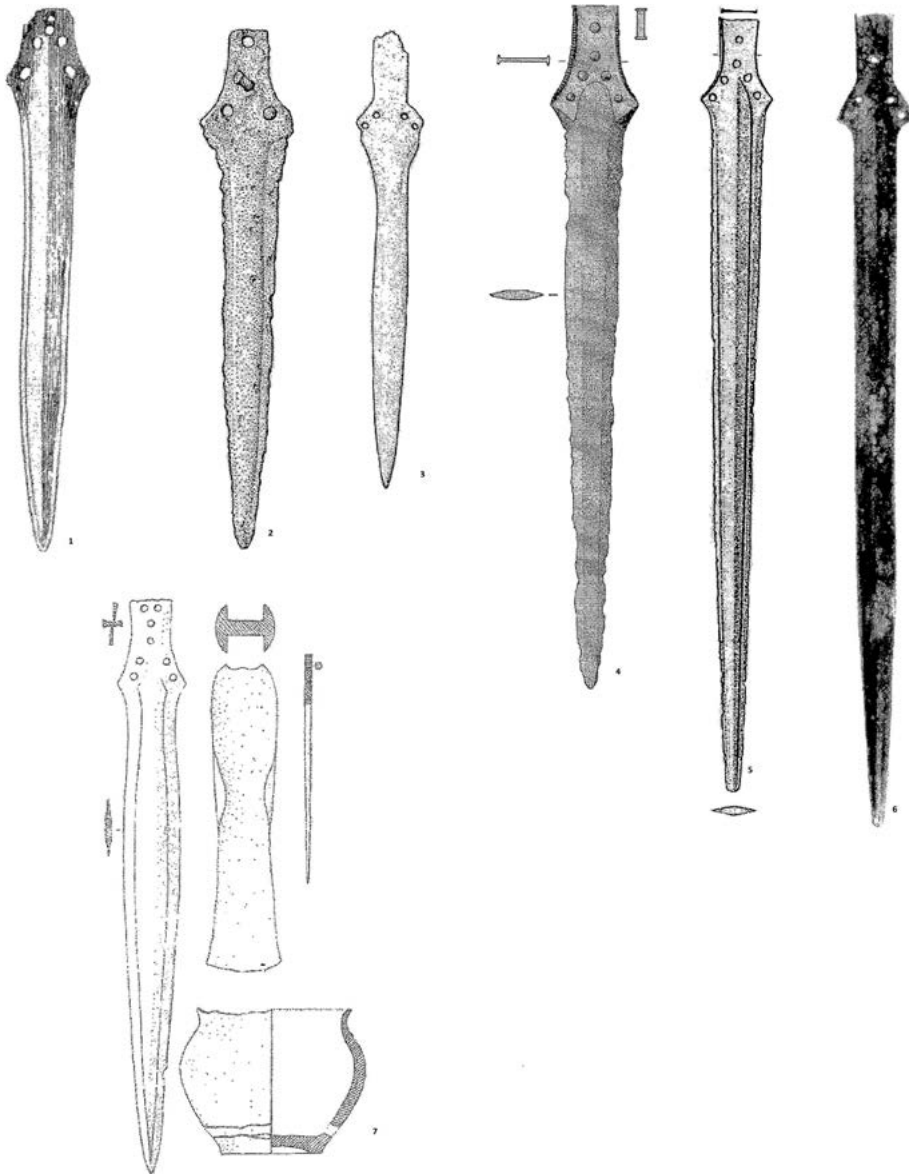


Fig. 3 Sombor–Smolenice type swords: 1) Bodrogkeresztúr; 6) Berlin (after Cowen 1966, Pl. XXI); 2) Limberg; 3) Smolenice; 5) Smolenice, grave 9 (after Sicherl 2004, Taf. 4); 7) Vrhnika, grave (after Gabrovec 1996, T. 1); Orşova (after Schauer 1972, Abb. 1).

shops.²⁸ In Schauer's²⁹ view, it is the shape of tang and hilt as well as the number of rivets (two on the tang and two on either shoulder, 4:2) that favours a common production centre for the Orșova, Sombor, Vrhnika, and Bački Vinogradi finds. The grip made of an organic material was fixed to the tang with bronze rivets. This type of tang is interpreted as originating in the workshops that were only in the process of adopting the practical method of riveting the hilt to the tang.³⁰ Cowen³¹ observed early on that this was not a matter of a linear evolution but rather the swordsmiths'/craftsmen's inquiring and experimental spirit and empirical approach in their tireless search for effective methods to make a longer blade. While craftsmen frequently simply reproduce the techniques used by previous generations, it is only a penchant for experiment and creativity that lead to new and innovative techniques.³² In view of this, the concept of technological choice, that is, of making a choice from various options depending on the obtained result is very important, as may be seen from the evolution of the swords discussed here. So, a concrete action or the manner of making an artefact may be construed as the technique characterised by five interconnected aspects: 1) material (e. g. bronze); 2) energy (e. g. charcoal); 3) tools (e. g. casting moulds, whetters); 4) motion (built-in knowledge); and 5) discursive knowledge.³³

Origin and chronological position

Much of the debating has been concerned with pinpointing the most likely area of origin of the Sombor–Smolenice swords. Cowen³⁴ sees the genesis and evolution of this, as well as the Boiu type, as local. In M. Garašanin's view,³⁵ however, Cowen's conclusions are based on insufficiently reliable records and an insufficient number of reliably dated closed finds.

²⁸ Schauer 1971, 42.

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ Cowen 1966, 300.

³² Bunnefeld 2016, 381.

³³ *Ibid.*

³⁴ Cowen 1966, 274.

³⁵ Гарашанин 1973, 385, 386.

Unlike Cowen, Nestor³⁶ sees the predecessor of this shape in the Veliki Gaj dagger type with decisive Mycenaean influences.³⁷ After them, the typological and chronological position of the type has also been addressed by Schauer,³⁸ who holds it was not a typological predecessor of the Sprockhoff Ib group (Asenkofen type), as suggested by Cowen,³⁹ Hänsel,⁴⁰ and Mozsolics,⁴¹ but contemporary with them.⁴² He then emphasises, as Müller-Karpe⁴³ before him, their Mycenaean or South-eastern origin. According to Schauer,⁴⁴ the curved grip of the Orşova sword is a rarity among tanged swords and occurs only in solid-hilted swords of the Au/Zurndorf and Zajta types, also sharing with them the number of rivets, the shape and cross-section of the blade. All this serves as a basis for him arguing that the sword from Orşova is the earliest flat-tang sword of non-Aegean shape, and for dating it to the Lochham horizon of the south-German Tumulus culture.

The chronological positioning of the Sombor–Smolenice type is based on not quite reliable closed assemblages in which an important place was assigned to the *Göggenhofen* type pin with a seal-shaped head (BrB₂–C), dated to the middle and late Tumulus culture.⁴⁵ Such a pin occurs in association with the type of swords in question in grave 9 at the Smolenice necropolis,⁴⁶ on the sites of Šaponje Salaši⁴⁷ and Hajdukovo–Bački Vinogradi,⁴⁸ and in association with the Bavarian sword (Berlin).⁴⁹ Yet, the clearest time frame is provided by the disc-butted axe (*Nacken-*

³⁶ Nestor 1937, 196.

³⁷ Nestor sees the Veliki Gaj (Nagygáj) daggers as important also for the evolution of the Boiu type sword, which provides a typological link between hilt-plate swords and tanged swords with decisive Mycenaean influences.

³⁸ Schauer 1972, 44.

³⁹ Cowen 1966, 295.

⁴⁰ Hänsel 1968, 41.

⁴¹ Mozsolics 1972, 374.

⁴² The reference here is to the Smolenice type.

⁴³ Müller-Karpe 1972, 374.

⁴⁴ Schauer 1972, 44.

⁴⁵ Novotná 1980, 73; Innerhofer 2000, 144–145; Bader 1991, 66; Harding 1995, 25; David 2002, Taf. 347/1; Vasić 2003, 38.

⁴⁶ Dušek 1980, Taf. 12/1.

⁴⁷ Harding 1995, 24; Gubitza 1908, 263; Trajković 2007.

⁴⁸ Trogmayer & Szekeres 1966–1968, 19, Taf. II/3–9.

⁴⁹ Cowen 1966, Pl. XXI/8; Sicherl 2004, 29.

scheibenäxte), type B₁, variant *Ighiel*,⁵⁰ which occurs with the sword on two sites: Šaponje Salaši⁵¹ and Hajdukovo–Bački Vinogradi.⁵² Later shapes of disc-butted axes occur in male graves of the developed Tumulus culture (BrC₁–BrC₂) from Banat in the south-east to Bavaria and Bohemia in the north-west.⁵³

The grave assemblages from Smolenice and Šaponje Salaši and the find from Bački Vinogradi are characteristic of the classical phase of the Tumulus culture, horizon *Göggenhofen*.⁵⁴ The Smolenice type sword with a broken tang from grave 2, Winklarn, belongs to the BrB₂ phase based on associated finds, and so do the chance finds from Limberg and Berlin.⁵⁵ Based on analogies, the find from Bela Crkva has also been dated to this phase.⁵⁶ As has already been noted, Schauer⁵⁷ dates the find from Orşova to the Lochham horizon of the Tumulus culture of southern Germany. Cowen⁵⁸ dates the assemblage from grave 5, Povegliano, to BrB₂, and Gabrovec⁵⁹ dates the sword from Vrhnika to BrB, while cautiously dating the other grave goods, which he believes are of a later date, to the “Middle Bronze Age”. Of a somewhat later date would also be the sword from the Bodrogersztúr hoard.⁶⁰ In short, the Sombor–Smolenice group may be dated mostly to BrB₂.⁶¹

Find context of Sombor–Smolenice type swords

Although geographically scattered, the Sombor–Smolenice type swords show little variation in find context: they either come from inhumation burials (Smolenice,⁶² Šaponje Salaši, Vrhnika, Povegliano, Winklarn), or

⁵⁰ David 2002.

⁵¹ *Ibid.* Taf. 340/12–13.

⁵² Trogmayer & Szekeres 1966–1968, 19, Taf. II/3–9.

⁵³ David 2020, 90.

⁵⁴ Harding 1995, 25; Schauer 1971, 98; Schauer 1972, 43; Bader 1991, 67.

⁵⁵ Sicherl 2004, 29.

⁵⁶ Cowen 1966, 305; Sicherl 2004, 29.

⁵⁷ Schauer 1972, 44.

⁵⁸ Cowen 1966, 300.

⁵⁹ Gabrovec 1966, 441.

⁶⁰ Kemenczei 1988, no. 62; Cowen 1966, 308.

⁶¹ Cowen 1966, 310; Sicherl 2004, 29.

⁶² The necropolis at Smolenice, Slovakia, yielded two swords of this type (Sicherl 2004, Taf. 4/4, 6).

the circumstances of discovery are unclear (Bela Crkva, Bački Vinogradi, Orşova, Limberg, Berlin). This type has never been found in a hoard containing more than one specimen in its distribution area, except for a single case, the Bodroghkeresztúr hoard in Hungary. Since most are old finds lacking clear original archaeological contexts, it is often difficult to choose whether to look at them as isolated finds or as parts of grave assemblages. Certainly the most reliable in this respect is the sword from inhumation grave 9 at the Smolenice necropolis, which is also the only *in situ* find.⁶³ It is followed by the swords from inhumation grave 5 at the Povegliano necropolis explored in 1876/7,⁶⁴ the incomplete piece from the Winklarn necropolis, the sword from grave 2 in lower Austria⁶⁵ and the Slovenian find from Vrhnika.⁶⁶

The find from Šaponje Salaši, unearthed by deep ploughing in 1887,⁶⁷ has attracted the attention of many researchers.⁶⁸ Given that the find consists of two disc-butted battle axes, a short tanged sword, eight seal-headed pins, a penannular three-ribbed bracelet, a fluted bracelet, a rectangular-sectioned penannular bracelet, and a small handled cup, it is possible that the artefacts came from several inhumation graves.⁶⁹ One or more inhumation burials are suggested by the reference to six fragments of a human skull and an arm bone,⁷⁰ and to two, not one, ceramic vessels.⁷¹ Gubitza⁷² describes one of the latter as the “urn with six nubs at the top and bottom of the body and two perforated triangular lugs”, while the other two are smaller cups. There is no closer information as to whether the human bones, the pottery, and the bronze objects came from the same grave. Ceramic vessels were found in association with Sombor–Smolenice type swords in the group of finds from Bački Vinogradi and

⁶³ The sword was laid on the body on the North to South axis with its hilt on the pelvis and blade on the left thigh, about 10 cm from the left knee. Dušek 1980, 341, 364, Taf. 12/I.

⁶⁴ Cowen 1966, 309.

⁶⁵ Cowen 1966, 309; Sicherl 2004, 28.

⁶⁶ Gabrovec 1966, 441, sl. 1

⁶⁷ Gubitza 1908, 262–264

⁶⁸ Cowen 1966, fig. 8; David 2002, Taf. 340/12–13; Trogmayer & Szekeres 1966–1968, 18, 20; Garašanin 1983, 543; Трајковић 2007, 15, T. I and II/1; Vasić 2003, 38.

⁶⁹ Trogmayer & Szekeres 1966–1968, 18; Трајковић 2007, 15.

⁷⁰ The human bone material is not in the Sombor City Museum; it was probably lost in the interim. Dudás 1898, 24, 25; Gubitza 1908, 262.

⁷¹ The Sombor City Museum has only one of the mentioned vessels, a biconical cup.

⁷² Gubitza 1908, 265.

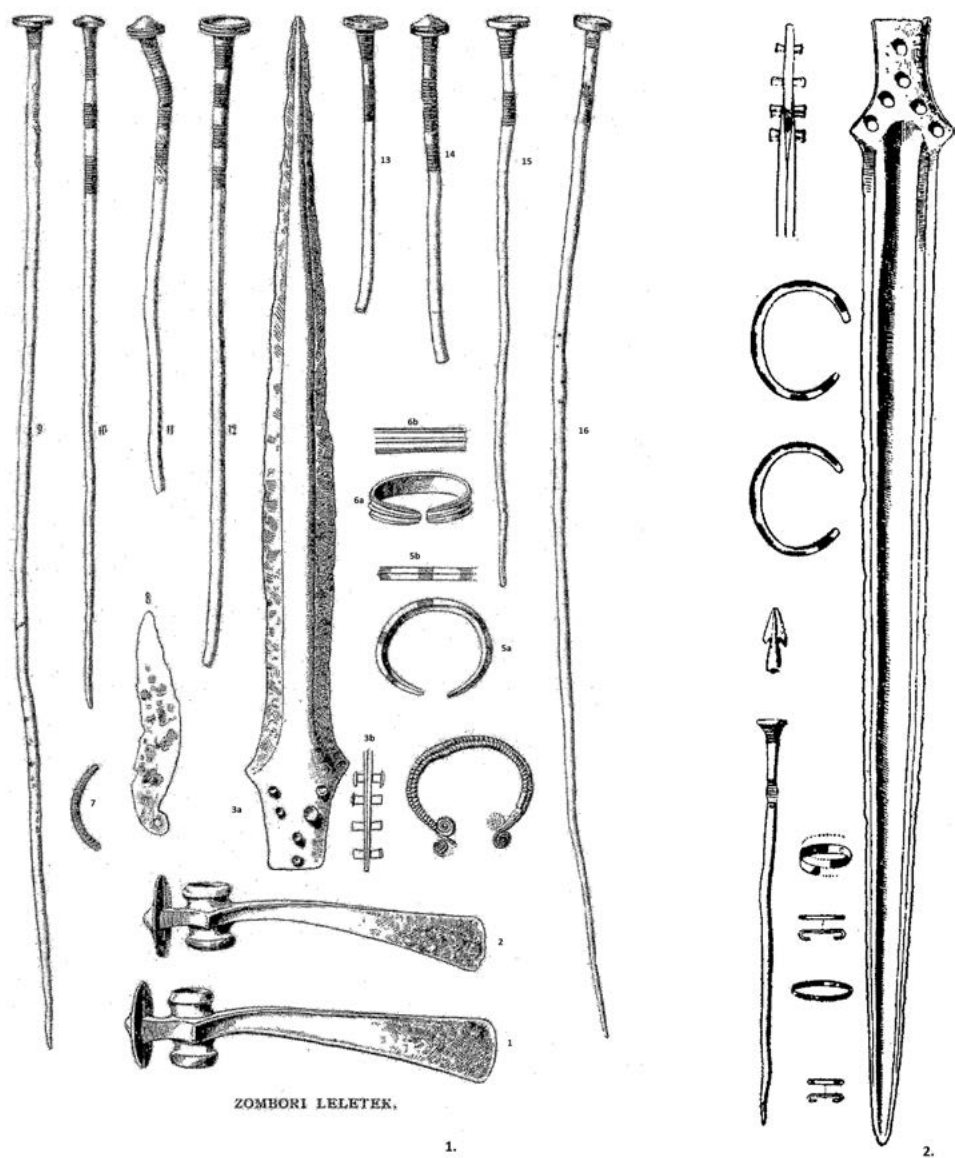


Fig. 4 1) Grave, Šaponje Salaši, Sombor (after Gubitza 1908, ábra 1–16); 2) Grave 9, Smolenice (Cowen 1966, fig. 9).

the grave in Vrhnika. Apart from the piece of information that the Bački Vinogradi find was unearthed by deep ploughing, its original context and composition are also uncertain,⁷³ so Cowen's⁷⁴ remark comes as no surprise that "contrary to the impression given by a former arrangement in the Subotica Museum, it appears that this piece is in fact an isolated find". According to Trogmayer and Szekeres,⁷⁵ the find consists of a Keszthely type sword,⁷⁶ a disc-butted battle axe, a fragment of a flame-shaped spear and a small cup. The Subotica Museum keeps other artefacts recovered from this area and, according to the curator, all of them are registered as belonging to the same find.

The sword from Bela Crkva is classified by Cowen⁷⁷ as Boiu type 1b, but on account of its lack of decoration, angular shoulders, and even the 4:2 rivet formula, he places it closer to the Sombor–Smolenice group and defines it as a hybrid form. The sword was first published as early as the end of the nineteenth century,⁷⁸ and much discussed,⁷⁹ but its original context remains obscure. The context is also unclear for the modest dagger (226 mm in length) from Limberg (Heidenstatt), lower Austria,⁸⁰ and the sword from an unknown south-Bavarian site which arrived in the Berlin museum by purchase.⁸¹ The same goes for the find from Orșova, Romania.⁸²

Results of microscopic analysis of the sword blades from the sites of Šaponje Salaši and Bački Vinogradi

Manufacturing techniques, the shape of the edge, the balance of the blade, and use-wear analysis may provide clues to the function of Bronze Age swords. From detailed examination through the abovementioned

⁷³ Trogmayer & Szekeres 1966–1968, 19.

⁷⁴ Cowen 1966, 297, n. 7.

⁷⁵ Trogmayer & Szekeres 1966–1968, 19.

⁷⁶ Listing the most important finds of the Tumulus culture in Vojvodina, N. Tasić (in Tasić 1974, 185–256) described the Keszthely type sword as one of its typical forms of metalwork, referring to the sword from the site of Hajdukovo–Bački Vinogradi.

⁷⁷ Cowen 1966, Pl. XIX/6, 284, 305.

⁷⁸ Hampel 1896, 81, ábra 18.

⁷⁹ Nestor 1937, 202, Pl. 3/3; Гарашанин 1973, сл. 20–21.

⁸⁰ Cowen 1966, Pl. XXI/2.

⁸¹ *Ibid.* Pl. XXI/8.

⁸² Sicherl 2004, 28; Bader 1991, 66; Schauer 1971, 44, Abb. 1.

steps, various “micro” stories or individual biographies may be read.⁸³ At the core of the concept of biography are the questions about the relationship between people and objects, the ways in which meanings and values accumulate and change.⁸⁴ This has to do with the fact that the functions, meanings, and properties of objects may change over time.⁸⁵ During the life cycle of metal objects people leave material traces by handling, carrying, or working them in any way, so weapons should be seen as interlocutors among persons of completely different identities, many of whom played a role in controlling power relations in society.⁸⁶ If all these data of archaeological and technological nature are taken into account, a much clearer picture emerges of the life and death of metal objects, in this case, swords.

The use of the sword as a status symbol⁸⁷ and its practical use as a combat weapon have been much discussed topics.⁸⁸ Much published work has been concerned with potential and diverse manners of metalwork use, wear and damage.⁸⁹ Mödlinger⁹⁰ maintains that whether Bronze Age swords were used for ritual purposes or as a weapon in a broader sense is of lesser importance, but rather that a close connection between the two functions should be presumed.

Bronze Age swords are divided by function into thrusting and combined, cutting/slashing and thrusting swords. The primary use of the sword as either a stabbing or a cutting weapon is defined by the balance between its blade, hilt, and weight, plus the shape and the cross-section

⁸³ Kopytoff (1986) believes that full understanding of objects cannot be based on a single moment of their existence and that production, exchange, and consumption processes and cycles should be looked at as a whole. Not only do objects change throughout their existence, but they also frequently have the ability to accumulate history, so they derive their current importance from persons or events they are associated with. Kopytoff 1986; Fontijn 2008; Molloy 2011 and Molloy 2018; Blečić Kavur, Powell & Jašarević 2019; Blečić Kavur, Kavur & Starac 2020.

⁸⁴ Gosden & Marshall 1999, 172.

⁸⁵ Hahn 2005, 40–45, 122–128; Hahn 2011, 114.

⁸⁶ Molloy 2018, 200.

⁸⁷ Born & Hansen 1991; Wüstemann 1992.

⁸⁸ Bridgford 1997; Kilian-Dirlmeier 1993, 130–162; Quillfeldt 1995, 19–25; Harding 2000, 88–89.

⁸⁹ Bridgford 2000; Kristiansen 2002; Molloy 2007, Molloy 2008; Molloy 2011; Mödlinger 2011; Colquhoun 2011; Siedlaczek 2011; Horn 2013; Knight 2018; Molloy 2018; Gentile & van Gijn 2019; Herman et al. 2020.

⁹⁰ Mödlinger 2011, 94.

of the blade.⁹¹ It should be noted that long and narrow blades predominated in the Middle Bronze Age, which suggests their primary function as thrusting weapons.⁹² Some examples, however, show that this kind of weapon was secondarily used as a cutting weapon, as evidenced by the sharp cutting edges of long blades.⁹³ The centre of gravity of the stabbing sword is near the grip, and of the thrusting-and-cutting sword in the lower part of the blade, which means that the thrusting sword can be wielded swiftly, whereas the cutting-and-thrusting sword is slower to wield but strikes more forcefully.⁹⁴ It was not until the end of the Middle Bronze Age that the blade became wider and heavier, enabling the use of the sword as a more effective combined weapon for cutting and thrusting.⁹⁵

Identifying the practical function of swords requires interpretation of use-wear marks on hilts and blades,⁹⁶ but they frequently elude unambiguous detection and interpretation. One of the reasons for this difficulty is certainly the poor state of preservation, of the blade in particular, coupled with patination. Another and no less important one is re-sharpening, which is provable from the shape and cross-section of the blade, and means previous use of and damage to the sword.⁹⁷ Damage to the edge may show whether the sword was used in battle, and indicate the possible manners of use. Some traces may be linked reliably to combat use because it leaves marks such as cuts produced by the edge-to-edge impact in the course of attack or defence.⁹⁸ Damage would most likely be inflicted to the upper part of the blade close to the grip (Fig. 5), and in the impact zone/centre of percussion, which is located approximately in the second quarter of the blade from the tip and transfers maximum force.⁹⁹

Since Bronze Age warriors were quite aware of the properties and lifespan of their weapons, severe damage to the blades should not be expected because minor dents and bulges could be almost completely re-

⁹¹ Mödlinger 2011, 75; Bunnefeld 2012.

⁹² Mödlinger 2011, 75.

⁹³ Molloy 2007.

⁹⁴ Bunnefeld 2012.

⁹⁵ Mödlinger 2011, 76.

⁹⁶ Bunnefeld & Schwenzer 2011, 240–242.

⁹⁷ Kristiansen 1984.

⁹⁸ Gentile & van Gijn, 2019, fig. 4, 5A-C; Herman et al. 2020, T. 5, fig. 5a, b.

⁹⁹ Molloy 2011, 75.



Fig. 5 U-shaped mark, upper third of the blade, Hajdukovo–Bački Vinogradi, inv. no. 2969 (photo: N. Dimovski).

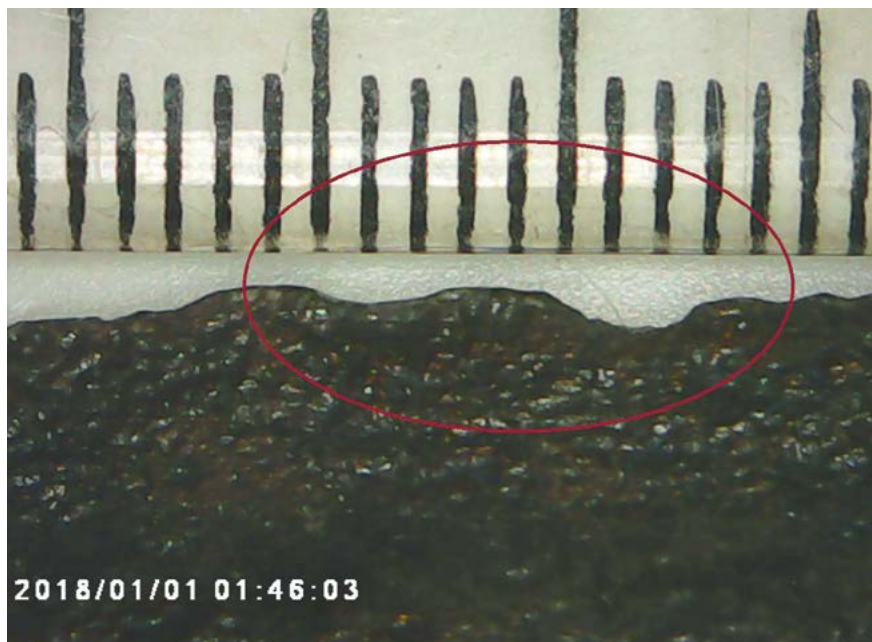


Fig. 6 Dents, Šaponje Salaši, inv. no. 3736 (photo: A. Putica); 6a) Hajdukovo–Bački Vinogradi (photo: A. Putica).

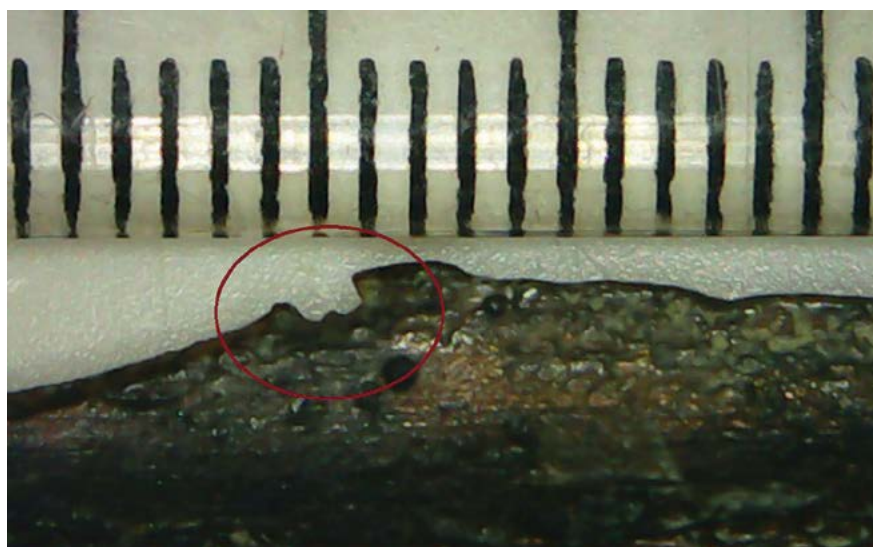
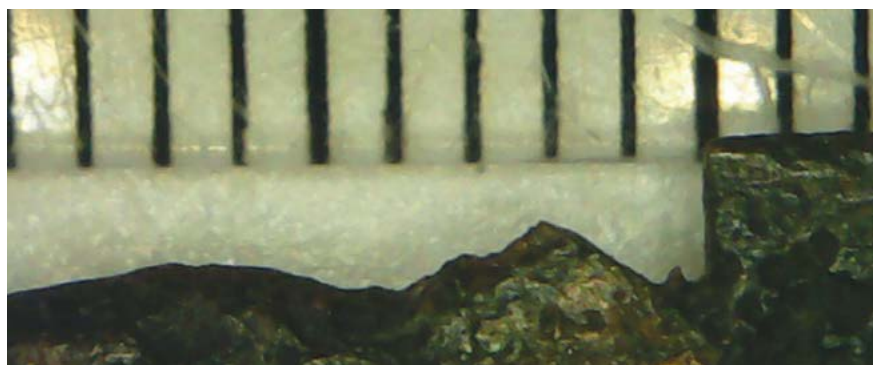


Fig. 7 U-shaped mark, upper third of the blade, Hajdukovo–Bački Vinogradi, detail; 7b) double U-shaped mark, lower third of the blade, Šaponje Salaši; 7c) double U-shaped mark, Šaponje Salaši, detail (photo: A. Putica).

moved by re-sharpening.¹⁰⁰ Swords used (primarily) as stabbing weapons, as is the case with the swords in question, usually have a narrow blade with a compact cross-section, small cutting edges, a massive middle and parallel sides. Microscopic examination of the blades from the sites of Šaponje Salaši and Bački Vinogradi has shown traces suggesting contact with other weapons, which implies their use in a martial context. The most frequent marks observed on both blades are dents (Fig. 6, 6a), which is also a pattern, that is, the spread of a mark along the edge.¹⁰¹ The dents are shallow and wide, and markedly rounded in profile, which makes it difficult or, in most cases, impossible to determine the direction of impact.¹⁰² They were likely made by a rounded object such as an axe handle or bone. As a result of repairs, dents and cuts become quite shallow and rounded, which makes them difficult to notice in the absence of other indicators, such as repair-related striation.¹⁰³ Swords of the Sombor–Smolenice type are considered to have been used mostly as stabbing weapons on account of their short, rapier-like blades.¹⁰⁴ However, the blades of both swords (Šaponje Salaši and Hajdukovo–Bački Vinogradi) show traces suggesting close contact with another blade, such as a U-shaped mark (Fig. 7, 7a, 7b). A U-shaped mark has also been observed on the sword from Bela Crkva.¹⁰⁵ Such marks are likely the result of a “twisting” movement following contact with another blade.¹⁰⁶ Another hypothesis is that they are caused by a light blow against the edge of a bronze shield.¹⁰⁷

Two or more grouped marks, so-called clusters, have also been observed (Fig. 8, 8a). Grouping is the result of repetitive performance of the same combat action or sequence on the same part of the edge.¹⁰⁸ Connecting the use-traces into characteristic patterns as well as their localisation on particular parts of the edge may provide more information about

¹⁰⁰ Harding 1999, 166; Molloy 2007, 99; Molloy 2011, 77; Siedlaczek 2011, 118.

¹⁰¹ Herman et al. 2020, table 6.

¹⁰² Herman et al. 2020, fig. 7; Horn 2013, 22, fig. 2d, e.

¹⁰³ Horn 2013, fig. 2f.

¹⁰⁴ Harding 1995, 24; Bader 1991, 66.

¹⁰⁵ Tarbay & Mitrović 2022, fig. 7-5.

¹⁰⁶ Bunnefeld 2012, fig. 7.

¹⁰⁷ Quilliec 2008, Fig. 2; Molloy 2011, 75, 76; Molloy 2011, fig. 5/b; Molloy 2018, fig. 10.8.

¹⁰⁸ Herman et al. 2020, table 6; fig. 21, 22.

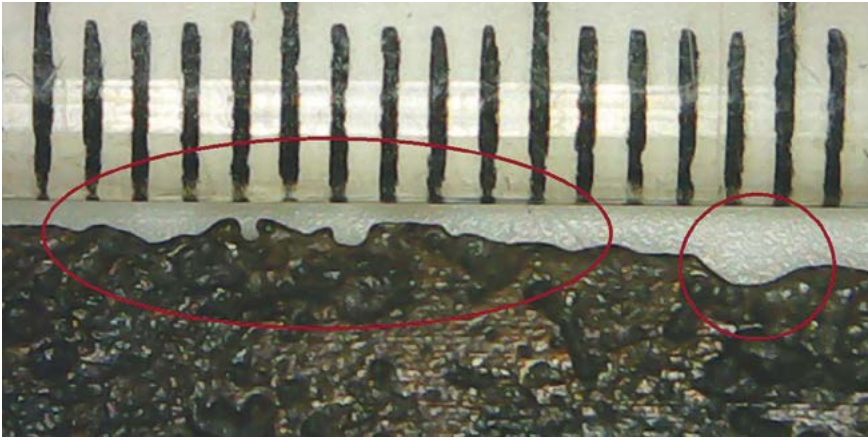


Fig. 8 Cluster of marks and a dent, Šaponje Salaši;
8a) cluster of marks, detail (photo: A. Putica).



prehistoric fighting styles than single marks.¹⁰⁹ Parrying a blow or redirecting attack would have used the trajectory and relative movement of both blades on interception, resulting in a minor damage to any place along the edge.¹¹⁰ When, for example, parrying results in a sliding movement, the relative lack of hardness may produce rippling or slight rolling of the edge, as shown by the sword from Sombor (Fig. 9).¹¹¹

¹⁰⁹ Herman et al. 2020, fig. 21.

¹¹⁰ Horn 2013.

¹¹¹ Molloy 2011, 75; Gentile & van Gijn 2019, fig. 5D.

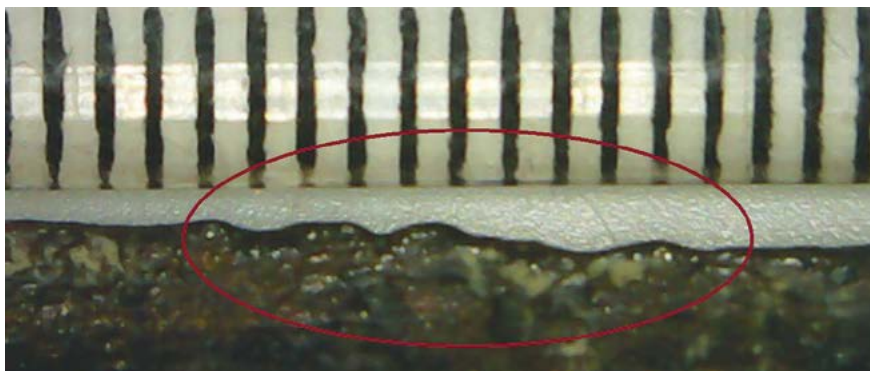


Fig. 9 Rippling of the edge, Šaponje Salaši (photo: A. Putica).

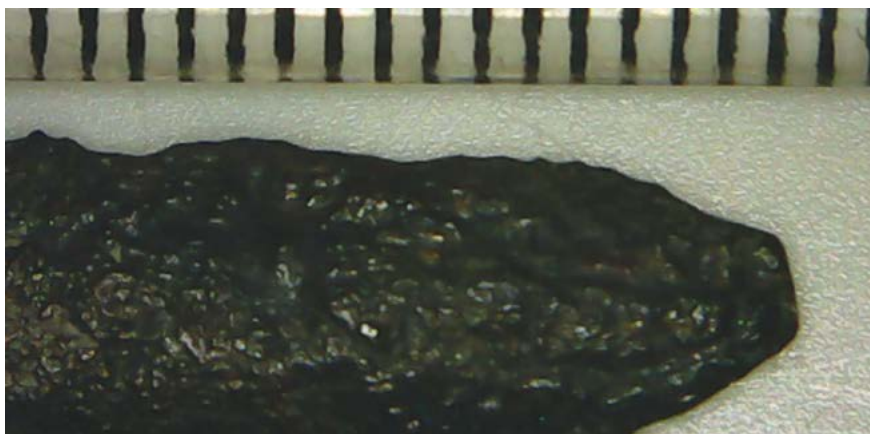


Fig. 10 Blunted blade tip, Šaponje Salaši; 10a) Hajdukovo–Bački Vinogradi (photo: A. Putica).

It is interesting that the tips of both swords are flattened and bent out of the expected plane (Fig. 10, 10a). This damage was probably caused in an attack manoeuvre by the tip coming into contact with the flat side of another sharp weapon.¹¹² In such cases, tips under pressure may be complementary with blow traces. Protective equipment, such as armours or wooden shields, may be yet another source of this damage, but archaeological evidence for the period under study is lacking.¹¹³ The bent tip may be secondary evidence for the use of protective equipment, but this kind of damage could also be caused by bone or wooden weaponry.¹¹⁴

Material displacement is plastic deformation in the zone of impact (Fig. 11). Metal reacts to impact in different ways consistent with different factors: the force of impact, the shape of the object, and the properties of the material such as hardness and ductility.¹¹⁵ The impact may cause damage to the edge of the blade such as cuts or dents, because the metal yields in the zone of impact depending on its ductility. If the ductility of the impacted material reaches its limits, failure will occur (the object either cracks or breaks completely). The presence of material displacement is a good indicator of the anthropogenic origin of the damage.¹¹⁶ The rivets missing from the sword from Hajdukovo suggest the hilt was overstressed (Fig. 5).

In brief, swords of the Sombor–Smolenice type may be described as short, light, and inelastic weapons, suitable for close-range blows and cutting rather than for broad, forceful blows.¹¹⁷ It remains unclear whether the swords were the main or a secondary weapon, and whether their users were professionally trained, given that the observed marks (clusters, patterns) suggest various combat styles. The lack of evidence characteristic of direct edge-to-edge contact means that the manoeuvre targeted the flat of the blade, the shield, or some other weapon.¹¹⁸ The design, form, and decoration of weaponry do not only depend on its use but are the function of various factors, cultural and technical considerations such

¹¹² Horn 2013, fig. 3d.

¹¹³ Molloy 2009; Uckelmann & Mödlinger 2011, 194–195.

¹¹⁴ Horn 2013, 22, 32.

¹¹⁵ Ductility (Lat. *ductilis*, soft) is the ability of a solid material to sustain plastic deformation under stress before reaching the point of fracture. Horn 2013, fig. 2c, e.

¹¹⁶ Horn 2013, 22.

¹¹⁷ Molloy 2007; Molloy 2011, 74.

¹¹⁸ Horn 2013.

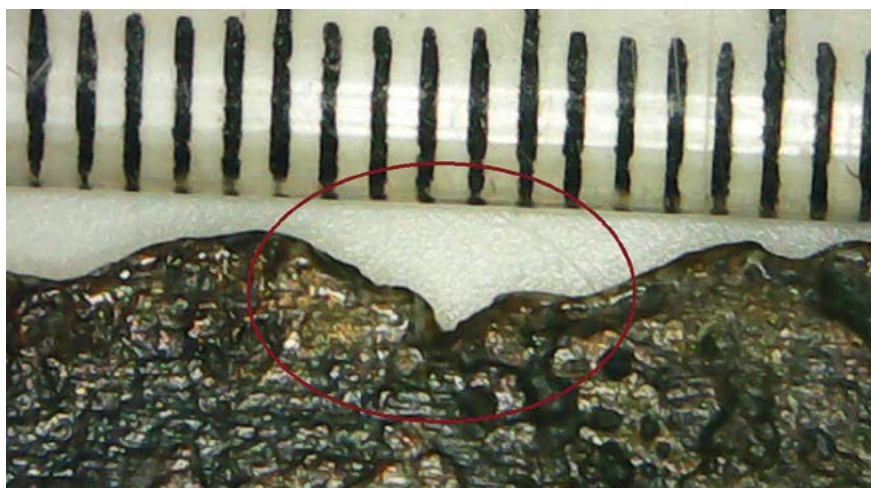


Fig. 11 Displacement of material, Šaponje Salaši (photo: A. Putica).

as fighting techniques or religious aspects or rules, with minor variations – up to the point when such considerations bring about change or further evolution of the weapon.¹¹⁹ These short and relatively light (usually less than 500 g) swords were fast and efficient and thus shared similar functional characteristics despite observable regional variations.¹²⁰ The Sombor–Smolenice type seems to be the result of experimentation with new ways of fixing the hilt; conditionally speaking, a local experiment, given that as many as three pieces come from Vojvodina. Based on the relatively small number of finds, this new shape of the tang does not seem to have been accepted by sword-smiths or sword users.

Practical, social, and symbolic role of the sword

We have made an attempt in this paper to touch on the questions of function and meaning of Bronze Age swords of the Sombor–Smolenice type using the example of the finds from Vojvodina (Šaponje Salaši, Hajdukov–Bački Vinogradi, and Bela Crkva). Despite the problems involved in the attempt to pinpoint their function and meaning, the sword

¹¹⁹ Mödler 2011, 153.

¹²⁰ Molloy 2020, 123.

was developed exclusively for the purpose of combat with other people, in attack or defence. It should be emphasised therefore that it was not an object derived from utilitarian or hunting equipment such as knives, spears, bows, and the like.¹²¹ From its first appearance in the Early Bronze Age, the sword, apart from its original function, was also a highly valued, symbolically charged object, a sign/symbol of the warrior (and political) elites, a status and prestige object, or an offering/gift to gods.¹²² The practical function of the sword, then, is combat with other people, while its secondary functions probably included hunt and animal offerings.¹²³ At the heart of the sword as an archetype lies a combination of its functional and symbolic potentials, which different cultures adopted and differently interpreted over time.¹²⁴

The archaeological record shows that Bronze Age weapons usually come from hoards or occur as isolated finds, which makes it difficult to speak of warrior identities. In the Carpathian basin¹²⁵ and the Northern Balkans, burials containing swords are very rare,¹²⁶ in contrast to some parts of Western Europe which have yielded many lavish burials with weapon deposits.¹²⁷ The archaeological context of the Sombor–Smolenice swords shows little variation. They either formed part of inhumation burials or were isolated finds, showing a noticeably scattered geographical distribution. The fact that they were part of a grave assemblage points to a certain role in expressing the identity of the deceased.¹²⁸ Unfortunately, anthropological data about sword-bearers is usually lacking, especially in Vojvodina.

The presence of swords in graves is commonly interpreted as a sign of elite social status. However, access to weaponry and its distribution within a community could also depend on factors that do not necessarily link weapon-bearing with high social rank.¹²⁹ Further indications as to

¹²¹ Molloy 2007.

¹²² Mödlinger 2011, 92.

¹²³ Vandkilde 2000, 21.

¹²⁴ Deutscher, Kaiser & Wetzler 2014; Harding 2011.

¹²⁵ In Transdanubia only sixteen Late Bronze Age burials containing swords are known (Tarbay 2020, 50–54, Fig. 12, List 2).

¹²⁶ Harding 1995, 23–80; Molloy 2018, 221.

¹²⁷ Clausing 2005.

¹²⁸ Fontijn 2002, 25–36.

¹²⁹ Kristiansen 1984.

what the sword might have connoted may be found in the presence or lack of decoration. This is why the nature and context of a sword matter: the sword found in a grave attracts attention as a possession of the person who used it in combat, and in some graves it was found in association with a number of other objects, showing that the assemblage and hence unquestionably the deceased were extraordinary.¹³⁰ Many elements, such as the expensiveness of the material used, the demanding manufacturing process, the amount of labour invested, suggest the great importance attached to the sword in the Bronze Age, thereby predetermining its social role as a status symbol. The social function of objects is about communication through the creation and maintenance of social and cultural identities (connoting status, age, or gender), but that communication is not necessarily representative of the actual social reality.¹³¹ The practice of depositing a sword in the grave of a particular individual primarily is an expression of the custom of equipping the deceased with material goods. The deceased had used the sword in one way or another during their lifetime; the sword thus points to their (to us unknown) activity and/or status. Weaponry in graves, swords in this case, should not be interpreted exclusively as expressing social status, but also as part of burial practices; namely, weapons reflected local burial customs and may or may not be representative of the status of the deceased.¹³² Mödlinger¹³³ believes that graves should not be seen as “mirrors of life” but as a source for better understanding people in their encounter with death, because a weapon has a biography independently of its owner or user. It is worthy of note in this sense that, for some, warriorhood was only a phase in life, and that weaponry was just part of a “more encompassing idealization involving the construction of martial personal identities”.¹³⁴ Although both warriors and swords may have gone through different life cycles, their cultural biographies are closely connected.¹³⁵ Weaponry is central to warrior identity, and the archaeological record can help us presume how its life ended: it was buried with the deceased warrior, deposited separately, pos-

¹³⁰ Harding 2011.

¹³¹ Vandkilde 2000, 22–24.

¹³² Mödlinger 2011, 71, 72.

¹³³ *Ibid.* 72.

¹³⁴ Fontijn 2002, 227.

¹³⁵ Fontijn 2002, 25–36; Kristiansen 2011, 202.

sibly as an offering to the (to us unknown) deities, or handed over to a successor, which would only be a temporary extension of its biography. The advent of the sword as an innovative and efficient weapon and its unstoppable spread during the Bronze Age should not be looked at only from the perspective of its practical use but also of its broader, symbolic significance. The symbolic significance of the sword concerned the sphere of supernatural and martial values, and the close connection between all three spheres (practical, social, and symbolic) clearly shows that none of them stood alone in the Bronze Age.¹³⁶ To be able to understand the extent to which a Bronze Age sword as a grave good or an isolated find was a symbol of ideologically constructed warrior status or an identity marker of an actual martial function requires establishing who really was in control of the weapon, who owned it, and under what circumstances it was offered or buried.¹³⁷

The weaponry deposited in graves, especially different types of weaponry, usually serve as a starting point for examining the range of arms used and combat styles, while regional and chronological differences between the weapons and their combinations in graves provide a basis for drawing conclusions about changes in fighting style.¹³⁸ Early and Middle Bronze Age burial practices and practices of depositing grave goods in the Danube area are characterised by regional variation and constant change.¹³⁹ The combination of axe and short sword is first reliably documented in the late phase of the BrB horizon, but it also occurs during the developed phase of the Tumulus culture (BrC_I),¹⁴⁰ when the sword/dagger-and-axe combination suggests a more or less equal use of cutting and thrusting weapons.

By the location of find spots the Sombor–Smolenice swords belong to the distribution area of the Tumulus culture. The processes behind the development of this new cultural phenomenon may be seen more clearly if the origin is taken into account of the new ideology of warriorhood, observable in the most advanced forms of the late phases of the Early

¹³⁶ Bunnefeld 2012, 141, 142.

¹³⁷ Notroff 2015, 93–99.

¹³⁸ David 2020, 87–101.

¹³⁹ *Ibid.* 87.

¹⁴⁰ *Ibid.* Taf. 319; 321, 1–5; 328, 1–4; 330, 5–9.

Bronze Age in the Carpathian basin.¹⁴¹ War became an integral part of social life, as suggested by an increasingly frequent presence of weapons in male graves, the images of warriors and their equipment carved on rock faces and stelae, arrowheads and spearheads embedded into bones (soft tissues) of the deceased, and ample evidence of injuries inflicted by close-combat weapons.¹⁴² New types of weapons (swords, spears) began to be used in the first half of the second millennium BC, leading to more effective fighting styles.¹⁴³ It may be assumed that Tumulus culture communities adopted a hitherto unknown, institutionalised warriorhood model based on groups of men professionally engaged in warfare.¹⁴⁴ At the Carpathian crossroads of the period, a transcultural entanglement arose combining both material and nonmaterial innovations from various sources. The fact that at the beginning of the Late Bronze Age, from the BrD phase on, especially in present-day Vojvodina, swords seldom found their way into graves suggests a change in burial practices and a different handling of weapons.

¹⁴¹ Vandkilde 2007, 129; Vandkilde 2014; Hänsel 1968; Bóna 1992; Harding 2000, fig. 1.3.

¹⁴² Osgood 2006.

¹⁴³ Harding 2006; Thrane 2006.

¹⁴⁴ Cf. Sarauw 2007, 66.

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Dragi Mitrevski*

*Faculty of Philosophy,
Ss. Cyril and Methodius University
Skopje, North Macedonia*

The Morava-Vardar Valley During the Great Aegean Migration

Abstract: The Morava – Vardar valley, the central Balkan communication in the north–south direction, has always had a significant and sometimes a key role in the cultural and historical processes in the broader area of South-eastern Europe. This fact especially applies to the transitional periods, which are usually filled with migratory movements and ethno-cultural exchanges. Such were the centuries during the transition from the Bronze Age to the Iron Age, which marked a decline in cultural and civilisational values, filled with migrations, military campaigns, and destruction. From the 13th to the 11th century BC, that period is usually related to the so-called Great Aegean Migrations. In them, the leading Balkan communications should have played a key role.

Key words: Central Balkan Communication line, Great Aegean Migrations

As the central Balkan communication in the north–south direction, the Morava–Vardar Valley has always had a significant, and sometimes even a key, role in the cultural and historical processes in the broader area of South-eastern Europe. This fact especially applies to the transitional periods, which are usually filled with migratory movements and ethno-cultural exchanges. Such were the centuries during the transition from the Bronze Age to the Iron Age, which marked a decline in cultural and civilisational values, filled with migrations, military campaigns, and destruction. From the 13th to the 11th century BC, this period is usually associated with the so-called Great Aegean Migrations, in which the leading Balkan communications should have played a key role.

* dragimit@yahoo.com

Much has been written about that period, yet we still do not have satisfactory answers to some basic questions.¹ Thus, the chronology, character, directions, and mechanisms of all ethnic movements and the fundamental cultural manifestations related to them have not yet been sufficiently documented. The consequences for local environments affected by these processes have been even more neglected. The reasons for this are always sought in poor archaeological research, especially in the territories immediately north of the Aegean world, which were most exposed to these events. However, during the last few decades, numerous new archaeological finds have emerged from the territories of the Morava and especially the Vardar valleys, which date exactly to that period and significantly complement the picture of the events from the 13th to the tenth centuries BC, as well as the role of the Morava–Vardar valley in them.²

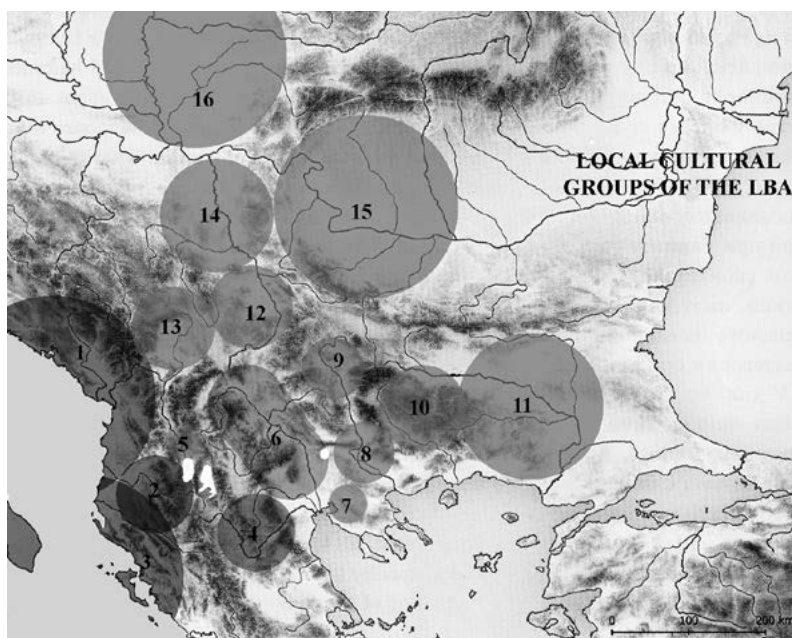
Older literature insists on several different waves of migration, which took place, mainly from north to south, but at different times and along different routes, carrying different cultural manifestations.³

The first wave usually dates to the last decades of the 13th to the beginning of the 12th century BC. It is associated with written and archaeological data on the destruction of Mycenaean centres, attacks by the so-called Northern Sea Peoples on Egypt, the migration of the Philistines, the fall of the Hittite empire, and the like. This wave was inevitably filled with major ethnic movements and unrest in the wide Aegean and eastern Mediterranean areas. It is believed that it took place mainly along sea routes and that various communities participated in it, mainly from coastal territories – from the northern Adriatic and south-eastern Alpine areas, through those along the Adriatic coast, towards the Aegean basin, to Egypt and the Eastern Mediterranean. However, questions remain about the character and archaeological manifestations of these ethnic movements and the consequences for local life, especially in the interior of the Balkans.

¹ Milošević 1949; Garašanin 1962; Desborough 1972; Snodgrass 1971; Bouzek 1974; Snodgrass 2000; Sandars 1978; Stefanovich 1973; Diamond 1988; Dickinson 2007; Whitley 2003; Drews 1993; Mitrevski 2022.

² Mitrevski 2003; 2022; Mitrevski 2022, 115; Папазовска 2019; Videski 2022; Stojić 1986; Булатовић & Станковски 2012; Luci 2007.

³ Milošević 1949; Garašanin 1962.

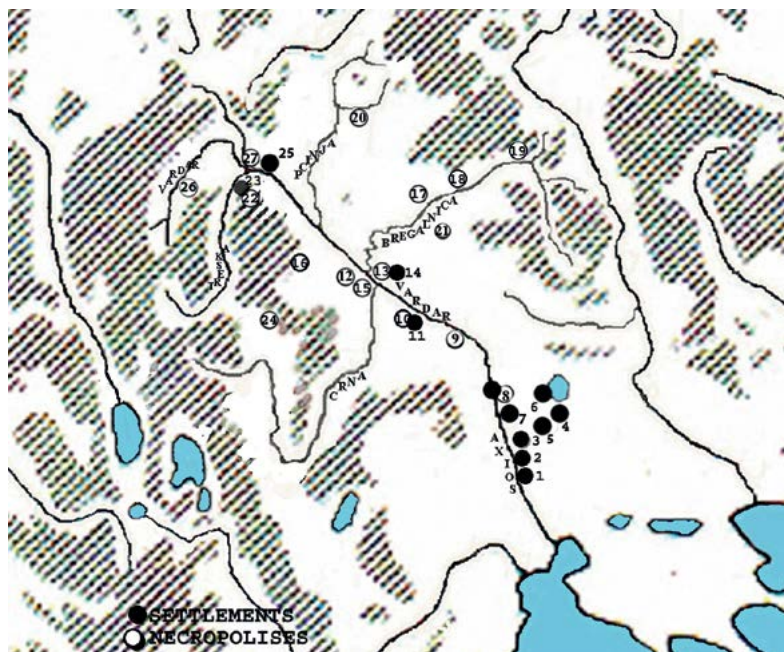


1. Map of the distribution of cultural groups of the Late Bronze Age in the central part of the Balkans.

Based on the situation at the end of the Bronze Age, more precisely in the 13th century BC, the usual manifestations of the first wave are not documented outside the coastal regions.

In the Central Balkans there were no destroyed settlements at that time, and there is no evidence of the penetration of new rituals and burial practices, nor of the emergence of foreign forms in local material culture. On the contrary, in the interior of the Balkans, especially in the Morava and Vardar valleys, peaceful development is documented at that time, with unhindered cultivation of local cultural values. Numerous Late Bronze Age sites encompass firmly defined cultural groups so that the entire period from the 14th to the early 12th century in the Central Balkans and Macedonia is exposed as a time of peaceful and prosperous development within the framework of stable Late Bronze Age groups (Fig. 1).⁴ More-

⁴ Since we are dealing with the Morava–Vardar region, which at that time maintained direct connections with the Aegean world, I think we can use absolute rather than Central European chronology.



2. Map with sites of the so-called Povardarska or Ulanci group of the Late Bronze Age.

over, the northern groups, along the Moravian region, more precisely those connected to the rivers of the Danube basin, were culturally oriented towards the Danube region and the Northern Balkans. In contrast, the southern communities, along the Vardar valley or from the territory of the rivers of the Aegean basin, were oriented towards the Aegean world (Fig. 2).

The situation was similar in other neighbouring regions, where communities along the central communication regions, such as the Haliakmona valley in north-western Greece, the Devol river valley in south-eastern Albania, and the Struma and Maritsa valleys in Bulgaria, achieved their greatest cultural achievements in the period of the 14th and 13th centuries BC.⁵

⁵ Mitrevski 2003, 23; Mitrevski 2022, 64; Karamitrou-Mentessidi 2008, 12; Andrea 1976; Prendi 1982, 220; Stefanovich & Bankoff 1998; Aleksandrov, Petkov & Ivanov 2007; Valla 2007, 368; Popov & Jockenhovel 2011, 193.

In the Central Moravian region at that time, the Paraćin group maintained its evolutionary development, which is best evidenced in the sphere of burials through the clear cultivation of traditions from older phases. Identical manifestations of the unique concept of burial, since the time of the Vatin group, were continuously cultivated in the 13th century BC.⁶ Based on the inventory, the Paraćin group shows that at that time, until the end of the Bronze Age, close relations with the Carpathian–Danubian world were still maintained and developed without hindrance. Even at the end of the 13th century, or more precisely at the beginning of the 12th century, novelties appear in settlement life and material culture, marking a new transitional period. The most indicative example of this is the appearance of the Mediana group, whose further development covers the centuries of the transitional period.

On the other hand, in the territory of the South Morava river and east Kosovo, during the Late Bronze Age, the so-called Brnjica group is formed through a specific symbiosis of elements from different sides, either from the north or the south.⁷ In this way, this group illustrates the Late Bronze Age, more precisely the period of the 14th–13th century, as a time suitable for the creation of new values but with the preservation of the old and fully developed burial concept.⁸ The oldest settlements of this group, especially those in the Vranje–Bujanovac region, were of the plain type, without any need for special protection and fortification. However, the settlement system had already changed in the next phase (Ha A1–A2) or during the 12th century BC. New settlements of the so-called hillfort type are built in easily defensible positions, spread out along the very edge of the valley.⁹

However, the most vivid example of the character of the Late Bronze Age is the situation in the Vardar valley. From the 14th to the 12th century BC, a local Late Bronze Age cultural group – the so-called Povardarska or Ulanci cultural group – flourished there. It is already well known, either for its settlements (Kastanas, Vardarofka, Kilindir, Mrdaja, Vardarski Rid, Stolot–U lanci, Manastir–Čaška, Skopje Kale, etc.), or for its numerous necropoleis (Vardarski Rid, Mali Dol–Tremnik, Ulanci, Vodo-

⁶ Garašanin 1982, 181.

⁷ Mitrevski 2019, 60.

⁸ Luci 1999, 92; Luci 2007; Srejić 1959.

⁹ Булатовић 2010, 103.

vratski Pat, D. Sonje, Brvenica, etc.) (Fig. 2).¹⁰ All these sites manifest unique and stable cultural values in which an important element is the maintenance of close relations with the South, with the Aegean world of the Late Bronze Age.

Based on all this, the situation in the Morava and Vardar valleys at the end of the Bronze Age confirms that the first wave of the so-called Aegean Migrations took place mainly by sea. In the interior of the Balkans, this unrest and migration did not feel more intense and had no significant consequences. On the contrary, the local communities of that time, especially those along the mainland communications, undisturbedly maintained and nurtured their traditional values and already established cultural relations, with the communities in the Morava valley turned towards the Danube and the Carpathian region, whereas the communities in the Vardar valley towards the Mycenaean, or more precisely, the Aegean world of the late Bronze Age.

The events within the so-called second wave of the Aegean Migrations were far more significant and dramatic. Archaeological data date it to the 12th and 11th centuries BC, clearly indicating a period filled with destructive processes and migrations, which left major consequences for the further development of Central Balkan communities, especially in North Macedonia.

Based on the distribution of archaeological finds of that time and the conditions in which they were discovered, it is seen that the carriers of these migrations moved along the central land communications, on a north–south axis, more precisely from the wider region of the Northern Balkans and the Carpathian–Danubian region towards the Aegean Basin, and the already destroyed Mycenaean and Asia Minor centers. Their presence in the southern regions is easily detected through numerous innovations appearing in the local material and spiritual culture. In this sense, the strongest indicator is the emergence of a new burial ritual with cremation in urns, as opposed to inhumation with embalming, as the only way of burial among domestic, late Bronze Age communities south of the Šar planina–Stara planina line. Equally indicative and characteristic are, to a certain extent, Central European or Danubian forms of weapons (swords, spears, axes – celts, sickles, etc.). We must not forget numer-

¹⁰ Mitrevski 2003, 46; Митревски 2013, 183; Папазовска 2019, 49; Videski 2022; Mitrevski 2022, 64.

ous depots of massive bronze objects and moulds for their casting or hidden caches of ceramic vessels with food, most often discovered in the northern and north-eastern parts of the Balkans.¹¹

All these phenomena first appeared in North Macedonia at the beginning of the 12th century BC, mostly in the Vardar valley, as novelties that mark the turbulent events and routes of mass movements of communities from the north to the south. Their final destination was always continental Greece and Asia Minor, and there, above the ruins of Mycenaean centres and in sub-Mycenaean and proto-geometric necropoleis as well as in the Troad (Troy B2), they appear as typical Danubian or Balkan products.¹²

Many decades ago, assumptions about the penetration of Balkan elements to the south and south-east were still current. However, today, we can speak about all aspects of these events in a much more documented way. The following text will briefly review the main manifestations that illustrate this: the second wave of the so-called Great Aegean Migrations.

The largest number of archaeological phenomena in the interior of the Balkans, dating back to the 12th and 11th centuries BC, clearly speak of unique events associated with migratory processes. They took place from the Danube, along the Morava–Vardar valley or along the Iskara, Struma, and Mesta rivers on the one hand, and to the east through the upper Thracian lowlands and the Maritsa valley on the other. These movements were undoubtedly filled with destruction, conquest, and destabilisation of local cultures with lasting consequences. However, the intensity, character, and consequences for further cultural development varied in different regions.

The Morava–Vardar valley was the most exposed region, with the most dynamic and dramatic events and, thus, the most serious consequences. The situation in the Vardar valley is particularly indicative.

A large number of finds in the Vardar valley clearly show that the unrest was long-lasting and caused by continuous military campaigns and the movement of new populations from the north along the Moravian communication. On this route, some stayed at certain points, but only

¹¹ Leshtakov 2018, 383; Черних 1978, 195; Jockenhovel 2018, 172; Бонев 1988, 54; Hansel 1976, 77.

¹² Garašanin 1953; Dimitrov 1962; Stefanovich 1973; Bankoff, Mayer & Stefanovich 1975; Ilieva 2018; Pavuk 2018.

for a short time, while others continued towards continental Greece. In any case, with these events, the previous Bronze Age development of the local population within the so-called Povardar or Ulançi cultural group of the Late Bronze Age was permanently interrupted.¹³ Thus, new relations with the north were established in contrast to the previously developed relations with the south and the Aegean world. Thus, the Vardar valley turned northwards and connected with Central Balkan communities, which would prove crucial for the physiognomy of North Macedonia's new Iron Age culture.

When it comes to the Vardar valley, we can safely conclude that after intensive development during the Late Bronze Age, almost all settlements were burned and forcibly demolished simultaneously, most often without being rebuilt. At the same time, the use of their necropoleis was also discontinued. Only in some cases, such as the settlement on Tumbi-Kastanas, which was a naturally more protected settlement (an island in the Vardar) and economically significantly more substantial than other settlements, did life continue, although with lasting consequences.¹⁴

The settlement on Kastanas was burned four times during the 12th and 11th centuries and rebuilt every time, but with dramatic changes and the appearance of numerous new finds, which arrived as external elements from the north along the Morava–Vardar route. Among other things, changes in the topography and organisation of the settlement itself have been documented, with a new Balkan architecture as well as the internal plan and concept of the buildings. They are accompanied by numerous mobile finds of northern origin, such as the new so-called fluted ceramics. Major changes in the economy are also evident with the use of new types of plants and livestock. Nevertheless, despite its turbulent events, Kastanas survived and extended its existence through the following centuries of the Iron Age. This was not the case with other Late Bronze Age settlements in the Vardar valley.

During the 12th and 11th centuries BC, all Vardar Valley settlements underwent unique processes manifested through the same archaeological phenomena. Almost simultaneously, they all ended up with heavily burned layers, which illustrates their violent and permanent destruction. In the burning sites of some of these settlements, such as in Manastir–

¹³ Mitrevski 117.

¹⁴ Hansel 1989; Hochstetter 1982; Hochstetter 1984; Kroll 1983.



3. Burnt layer with remains of unburied skeletons in the settlement of Manastir-Čaška.

Čaška or Tumbi-Kilindir, unburied bodies were discovered in the ruin layer as remnants of military operations (Fig. 3).¹⁵ In addition, certain

¹⁵ Jovcevska 2008, 22; Casson 1926, 132; Mitrevski 74, 118.



**BRONZE AXES-CELTS FROM THE BURNT LAYERS IN THE
LBA SETTLEMENTS ALONG VARDAR VALLEY**

1-4 Manastir-Chaska 5 Skopje 6-7 Bezanija-Krivi Dol 8 Mrdaja - Star Dojran

4. Individual finds of bronze axes – celts in the Vardar valley.

new, foreign types of bronze weapons (axes – celts, spears, arrows) also appear in the same layers. Their northern origin is indisputable because, as a type of find, these forms appear for the first time in North Macedonia (Skopje, Čaška, Krivi Dol, Mrdaja–Dojran) (Fig. 4).

Their necropoleis also vividly illustrate the situation with the burned and destroyed settlements on the Vardar river. The last burials in them in the old, domestic way with shrivelled inhumation in cysts, were carried out at the same time as the final destruction of the settlement. Such was the situation with all the necropoleis in the Vardar valley, from Brvenice and the necropolis in Scupi in the upper Vardar river, through the necropoleis in Ulanci, Vodovrata, and Mali Dol near Tremnik on the middle Vardar river, to Vardarski Rid – Gevgelija on the lower Vardar river (Fig. 2).¹⁶ However, in some of them, such as the old necropolis in Scupi

¹⁶ Mitrevski 2022, 64.

or the Mali Dol–Tremnik necropoleis, new graves with a new – foreign burial ritual, with cremation in urns, appear within the same necropoleis, dug directly above older graves with inhumation in cysts (Fig. 5).¹⁷ These burials with cremation in urns, which are a common burial method among the northern Balkan communities in the Morava and Danube valleys, represent a completely new phenomenon in the Vardar valley. Thus, we can recognise the graves of newcomers from the North as their strongest distinctive feature. It is obvious that on their way through the Vardar valley, the invaders from the North stayed for some time at certain points. Among other things, they used local necropoleis, and sometimes they formed their own necropoleis, as in the case of the famous necropolis in the Hippodrome near Skopje (Fig. 6).¹⁸ This necropolis corresponds entirely to the burials within the so-called Brnjica group from the territory of South Morava and east Kosovo. However, it also contains elements from the South, such as the find of a Mycenaean helmet made of boar teeth which, as a military trophy, indicates that Central Balkan warriors knew how to undertake campaigns to the south and then return north to the Hippodrome near Skopje (Fig. 7). In any case, in necropoleis with cremation in urns, the number of burials is always minuscule. The largest number of graves, eleven in total, were discovered in the necropolis at the Hippodrome, so it can be concluded that cremation with urns, as a foreign ritual, was quickly overcome, so that, throughout the Iron Age, not only in the Vardar valley but also in the entire territory of North Macedonia, the old domestic custom of burial with inhumation in cysts was practiced as the only ritual.

In addition to the already swept-away northern forms of bronze in the burnt layers of the settlement and in their cremation graves, the material culture of the newcomers should highlight the appearance of the so-called channelled pottery, which would be permanently domesticated in North Macedonia (Fig. 7). Hertley identified such vessels as the so-called Lusatian or Danubian pottery. Its penetration southwards can now be easily traced along the Morava valley to the Povardarje.

In local Late Bronze Age cultures of the Central Balkans, such as the Paraćin and Brnjica groups, this pottery was not known until the beginning of the 12th century. It first appeared at that time, and only in the

¹⁷ Papazovska 2022, 79; Mitrevski 2019, 79; Jovanova 2015.

¹⁸ Mitrevski 1994.



5. Individual burials with cremation in urns in the Mali Dol necropolis near Tremnik.

6. Burials with urns in the Hippodrome near Skopje.



7. Individual finds from the necropolis in the Hippodrome near Skopje.

Morava valley, first in Mediana near Niš, then in Hisar–Leskovac, and then in some settlements in the vicinity of Vranje.¹⁹ Its further journey southward continued through the 12th and 11th centuries, mainly through the Vardar valley towards Greece, where it was known as northern or barbarian pottery.²⁰

A similar situation occurred in the Struma and Mesta valleys, while movements in the far east of the Balkans were somewhat different in character. Ethnic penetrations occurred from north to south, or from the lower Danube across the upper Thracian plain and through the Maritsa valley towards the north-eastern Aegean and Asia Minor.²¹ Although these disturbances also interrupted local development, for example, the previously strong rise of metallurgy and the already established relations with the Aegean world, they were not as destructive. They did not leave such great consequences as in the Vardar valley. Numerous hoards, primarily with metallurgical values but also food, mark the ethnic movements in that region which, perhaps at first, had a reversible character, but nevertheless, by all accounts these groups eventually ended up in Asia Minor.²²

The current level of research into the second wave of the Great Aegean Migrations allows us to draw at least basic conclusions about these events. Most likely, it all started in the Danube region, where local communities achieved their highest economic and cultural rise at the end of the Bronze Age, thanks primarily to the rich deposits of copper and gold in the neighbouring regions. Thus, the communities in the territory of north-eastern Serbia, north-western Bulgaria, and south-western Romania experienced a real demographic boom at that time and achieved the most significant cultural, economic, and military power, only to suddenly die out.²³ This can only be explained by migration in two main directions (Fig. 8).

In the east, in the lower Danube region and neighbouring areas, numerous hoards with a large number of metal objects, mainly bronze

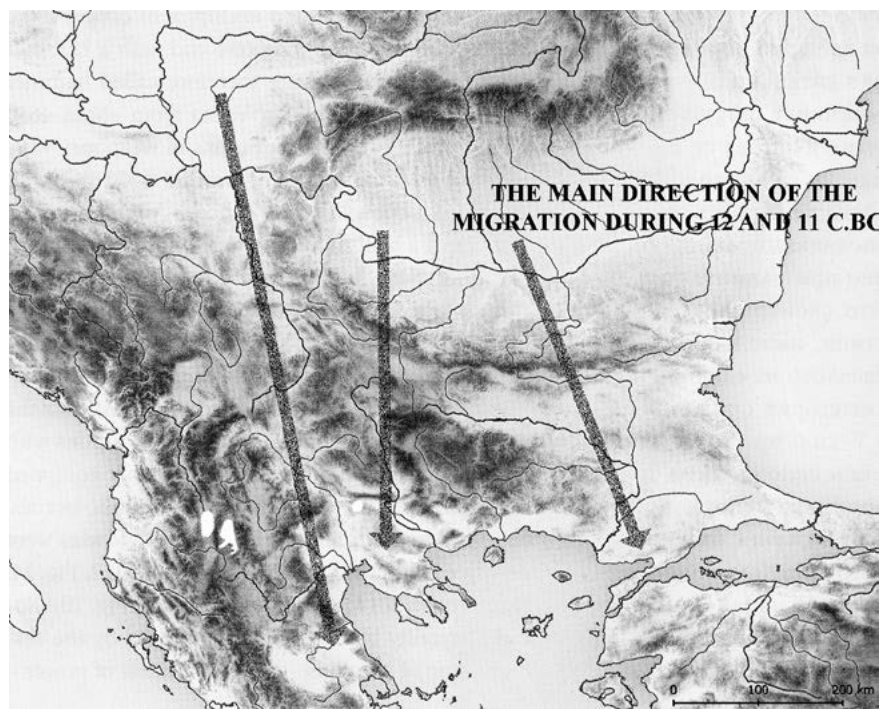
¹⁹ Stoic 1996; Stoic 2001, 19; Bulatovic 2010.

²⁰ Stefanovich 1973.

²¹ Pavuk 2018, 265; Ilieva 2018.

²² Detev 1964; Hansel 1976, 77; Бонев 1988, 54.

²³ Бонев 1988, 58; Mitrevski 2022, 123.



8. Map with the main directions of ethnic movements within the so-called second wave of the Great Aegean Migrations.

weapons and tools, as well as stone moulds for their casting, appear.²⁴ At the same time, on the other side, in the Morava valley, the first goods of northern origin appear. All this indicates that at the beginning of the 12th century, the Danubian communities and neighbouring tribes had already begun their migrations to the South. They migrated along the central Balkan communications, in the west through the Morava–Vardar valley towards the Aegean basin, and in the east through the Maritsa valley towards Asia Minor (Fig. 8). These movements affected different ethnic groups through a complex and long-term process, best documented in the territory of the Morava–Vardar valley.

Finally, we can say that after such a picture of the second wave of the Great Aegean Migrations, the question remains open to what extent

²⁴ Черних 1978, 195; Jockenhovel 2018, 172; Leshtakov 2018, 383.

these events can be connected with the known written sources of ancient authors about the penetration and migrations of Balkan communities towards continental Greece and Asia Minor. There is enough solid archaeological data for their more secure connection.

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Petar Milojević*

Institute of Archaeology
Belgrade, Serbia

Periodisation and Chronology of the Period from the 14th to the 6th century BC in the Morava–Vardar Basin

Abstract: This paper explores the development of archaeological periodisation and chronological models for the Morava–Vardar basin from the 14th to the 6th century BC. It presents a critical overview of how periodisation serves as a fundamental analytical tool in archaeological research, enabling clearer communication and cultural interpretation. The study examines various approaches to dividing this millennium into named chronological units, focusing on stratigraphic and spatial indicators used to define material culture phases. Special attention is given to the transitional period between the Late Bronze Age and the Early Iron Age, with an emphasis on how regional variability and interpretive flexibility affect the construction of chronological frameworks. By contextualising local schemes within broader South-eastern European traditions, the paper underscores the need for regionally grounded periodisation models that integrate typology, absolute dating, and historical interpretation.

Keywords: Late Bronze Age, transitional period, Early Iron Age, Mature Iron Age, periodisation, chronology, Nikola Tasić

Introduction

Periodisation is an essential tool in archaeological and historical studies, primarily enabling clearer communication and the transfer of specialised knowledge. Therefore, periodisation in archaeology should be understood as an attempt to categorise a specific span of time into distinct, named units. By identifying certain attributes within stratigraphic and spatial sequences, it becomes possible to define the characteristics of

* pertinax1983@gmail.com

a particular material culture, which in turn allows for dating of archaeological finds and their context. Given that natural and historical processes and events manifest differently across various geographic regions, periodisation models also vary accordingly. These models largely depend on the quantity and quality of the analysed sample, as well as on the interpretive sensibility of the researcher.¹ Such circumstances have contributed to the creation or modification of various periodisation systems for the Morava–Vardar valley region, which are often accompanied by differing terminology.

The development of periodisation and chronological frameworks for prehistory in Serbia represents a long-term process shaped by the contributions of numerous domestic and international scholars. A particularly prominent role in this development was played by the scientific work of Nikola Tasić, whose contributions left a profound mark on both national and European archaeology. His extensive and thematically diverse research encompassed all prehistoric periods across the territory stretching from the Carpathians to the Aegean sea, but his most significant achievements were in the study of cultural genesis and chronology of the Bronze and Iron Ages in the Serbian Danube region.

The key results of his research were based on the analysis of sites with well-preserved stratigraphy from the Bronze and Iron Ages in Serbia, Vojvodina, and Kosovo, as well as numerous contributions dedicated to the material and spiritual culture of prehistoric populations throughout the broader Balkans during the second and first millennia BC. Particularly notable are his studies dealing with the interactions between the cultures of the Serbian Danube region and the incised ware cultures, Urnenfelder, and the Gáva complex to the north, as well as cultural phenomena to the south such as the Paraćin, Gamzigrad, Brnjica, and Mediana groups, including their possible connections with the Mycenaean civilisation. His long-term research at the necropolis in Belegiš, along with other sites, contributed to the definition of a new eponymous Bronze Age archaeological culture, which has since been widely accepted in scholarly literature beyond Serbia. Equally important are his publications dedicated to the Iron Age and the definition of the Bosut–Basarabi culture, based on extensive excavations in Posavina (Bosut, Gomolava) and east-

¹ Benac 1967; Tilly 1984; Baker 1997; Клейн 2000; Pare 2006; Kotsonas 2016; Lucas 2019.

ern Serbia (Zlot cave). In his work on the Iron Age, he also addressed the genesis, development, and material culture of ethnocultural communities such as the Triballi and the Dardanians.

Such broad scholarly interests, encompassing a wide temporal and spatial range, and involving the analysis of diverse materials and the interpretation of complex problems, required the author to conduct numerous archaeological excavations either independently or as part of a research team. Valuable data related to the Bronze and Iron Ages were collected by Nikola Tasić through field investigations at sites such as, 1958 – Maćija necropolis near Maćija (Ražanj);² 1959–1960 – Crnokalačka bara near Rujište (Ražanj);³ 1962–1964 – Gradac–Stojića gumno near Belegiš (Stara Pazova);⁴ 1963–1964 and 1968 – Zlot cave near Zlot (Bor);⁵ 1964–1965 and 1975–1988 – Gradina on the Bosut near Bosut (Sremska Mitrovica);⁶ 1965–1985 – Gomolava near Hrtkovci (Ruma);⁷ 1968–1969 – Kozica near Dobra (Golubac);⁸ 1968 – Kalemegdan, Upper Town in Belgrade;⁹ 1969 – Pesača near Boljetin (Majdanpek);¹⁰ 1973 – Boka in Prčevo (Klina);¹¹ 1975 – Sava estate near Jakovo (Surčin);¹² 1986–1987 – Gologlava near Stalać (Kruševac);¹³ 1988 – Jazbine near Makrešane (Kruševac).¹⁴ These excavations played a foundational role in shaping Tasić's chronological and cultural interpretations of the prehistoric periods in the Central Balkans.

Discussion

The time span from the fourteenth to the sixth century BC encompasses a period that, according to the majority of European periodisation schemes,

² Tasić 1965c.

³ Tasić & Tomić 1960; Tasić & Tomić 1969.

⁴ Tasić 1962; Tasić 1963b; Tasić 1971a.

⁵ Tasić 1962; Tasić 1963a; Tasić 1964; Tasić 1968a; Tasić 1971c.

⁶ Tasić 1965a; Тасић 1987.

⁷ Tasić 1965b; Tasić 1988.

⁸ Tasić 1968c; Tasić 1969b.

⁹ Tasić 1968b.

¹⁰ Tasić 1969a.

¹¹ Tasić 1973; Tasić 1998.

¹² Тасић 1975.

¹³ Тасић & Томић 1987, 131–133.

¹⁴ Тасић 1990, 12–30.

can be divided into at least two clearly distinct technological and cultural phases. These phases are commonly referred to in archaeological science as the Bronze Age and the Iron Age – terms widely used with conventional meanings, although their definitions may vary depending on the sample, region, researcher, and scholarly tradition.

In the regions of the Morava–Vardar basin, there is currently no unified or widely accepted chronological system for the period in question. Instead, multiple periodisation and chronological schemes are encountered, largely defined through the work of various researchers based on stylistic and typological analyses of material samples from broader or more narrowly defined areas. The absence of absolute dates, along with the fact that the region remains insufficiently explored, has allowed for divergent chronological interpretations. This situation gives rise to a significant issue concerning the structuring of periodisation and chronology, and consequently, the use of certain terminology. Moreover, understanding the time span between the fourteenth and sixth centuries BC is particularly complex, as it involves numerous interwoven factors, including climatic changes, technological innovations, dynamic ethno-cultural and historical processes and, consequently, transformations in the archaeological record. The initial uncertainty and primary problem lie in serious discrepancies within the literature – on the one hand, regarding the general circumstances surrounding the transition from the Late Bronze Age (LBA) to the Mature Iron Age (MIA) and, on the other, concerning the chronological definition of the moment or specific time sequence during which this transition occurred.

The conventional boundary between the Bronze and the Iron Age is still not clearly defined and remains a sensitive topic, subject to ongoing debate within scholarly circles. Understanding the transitional period from one epoch to another poses significant challenges, particularly in relation to the temporal and geographic frameworks in which these processes occurred. The determination of markers and the conceptual boundary between the two epochs depends, on the one hand, on the quantity and quality of documented data from archaeological excavations and, on the other, on the various methods of data analysis and interpretation, which are often influenced by the contextualisation of archaeological evidence within broader historical processes and events. For these reasons, there are differing opinions regarding the chronological marker after

whose arrival we can speak of the beginning of the Iron Age, primarily due to the diverse criteria considered as indicators of change. Scholars have pointed to changes in ethno-cultural, socio-economic, and ideological structures, the onset of iron metallurgy or the utilitarian use of iron objects, transformations in technology or typology of everyday tools, or shifts in settlement patterns and burial practices.¹⁵

It is generally accepted that prior to the mastery of iron processing technology, there was a long period of sporadic use and working of meteoritic or native iron, documented in various parts of the world from the early fifth to the late second millennium BC.¹⁶ After this extended phase of seemingly marginal production, ironworking experienced a rapid development during the final two centuries of the second millennium BC. This shift changed the significance of iron, from being a prestigious commodity, it became a commonly used raw material for the manufacture of metal objects. Cliometric analyses of the prevalence of iron tools and weapons versus their bronze counterparts in the Aegean and eastern Mediterranean show that the eleventh century BC marks a key turning point in the adoption of the new metal,¹⁷ while recent studies have not significantly altered earlier conclusions.¹⁸ The period that can be designated as the beginning of the earliest Iron Age globally corresponds to the span between 1100 and 1000 BC. This represents the initial phase during which iron tools and weapons gradually began to outnumber those made of bronze. However, such a chronological marker applies only to specific regions, such as Mesopotamia, Anatolia, Syria, Palestine, and Greece, while in most other parts of the world bronze remained the predominant metal material for several more centuries.¹⁹

Generally speaking, by the end of the first half of the final millennium BC, iron processing technology had become fully established among populations in the Caucasus, Persia, India, Egypt, the Balkans, the Apennine peninsula, Iberia, and Central and Eastern Europe.²⁰ Regions such

¹⁵ Waldbaum 1978; Waldbaum 1999; Bouzek 1989; Gumă 1995; Pleiner 2000, 7–33; Po-trebica 2013, 10–19.

¹⁶ Pleiner 2000, 7–8.

¹⁷ Waldbaum 1978, 38–58; Waldbaum 1999; Cramer 1995, 9–11.

¹⁸ Veldhuijzen 2012, 246–247.

¹⁹ Waldbaum 1978, 38–58; Waldbaum 1980, 85; Waldbaum 1999; Bouzek 1989; Pleiner 2000, 20–22, Fig. 4; Dickinson 2006, 10–23, Fig. 1.1.

²⁰ Bouzek 1989; Pleiner 2000, 23–33.

as central Africa, China, Scandinavia, and the Atlantic coasts of Europe adopted the new technology somewhat later.²¹ However, not all scholars support this view, and there are alternative opinions suggesting a significantly earlier onset of widespread iron use in some of these areas.²²

The chronology of technological development in the exploitation and use of iron on the territory of Serbia has not yet been thoroughly studied, so only general observations and expert experience allow for certain assumptions. On such grounds, R. Vasić²³ identified three developmental phases in the use of iron during the Early Iron Age in Serbia, 1) Early Phase (10th–8th century BC) – this phase represents the initial adoption of the new metal within the framework of older indigenous cultures; 2) Developed Phase (8th–6th century BC) – a period marked by the full exploitation and widespread use of iron; 3) Late Phase (6th–4th century BC) – a time characterised by the influence of Italic and Greek cultures, accompanied by more advanced iron metallurgy and a more frequent appearance of gold and silver objects.

Experts who have studied the Iron Age in Serbia generally did not rely on technological phases of iron processing and most often advocate differing views regarding the cultural changes that chronologically define the beginning of the Iron Age. Its end is clearly marked by the Roman conquests of the region at the end of the first century BC, while its beginning remains a subject of ongoing debate, since no conventional markers have been adopted to chronologically, culturally, or technologically define the Iron Age on the territory of Serbia.

Milutin Garašanin believed that the Iron Age began with the stabilisation of conditions following the great tribal migrations that affected much of Europe and the Near East at the end of the Bronze Age.²⁴ Nikola Tasić and Dragoslav Srejšević held the view that the onset of the Iron Age should be linked to the appearance of horse harness equipment and the migration of the Thraco-Cimmerians, who also introduced advanced iron processing technology.²⁵ On the other hand, the aforementioned

²¹ De Maret & Genevieve 1996; Higham 2000, 146–151; Moore & Armada 2011, 18–21; Jensen 2013, 228–232.

²² Foster 1990, Fig. 9.3; Hjärthner-Holdar 1993, 62–99; Kristiansen 1998, 31–35; Young et al. 1999; Haselgrove 1999, 114; Moore & Armada 2011, 116–117.

²³ Vasić 1982; Vasić 1990, 15; Vasić 1999, 4–11; Vasić 2010, 3–8; Vasić 2015, 3.

²⁴ Гарашанин 1973, 455–456.

²⁵ Srejšević 1981, 43–44; Tasić 1983, 109–111.

Rastko Vasić argued that the beginning of the Iron Age is marked by technological advancement, specifically the full adoption of iron exploitation and use, which becomes archaeologically visible through the quantitative dominance of iron artefacts.²⁶ In accordance with these differing viewpoints, various relative-chronological schemes developed for the territory of Serbia.

The development of chronology and periodisation for the period between the fourteenth and sixth centuries BC in Serbia has a long-standing history. At the end of the nineteenth and the beginning of the twentieth century, the chronological division proposed by Austrian prehistorian Moritz Hoernes was widely accepted across the territory of the Yugoslav lands, including Slovenia, Croatia, Vojvodina, and Bosnia and Herzegovina.²⁷ In addition to Hoernes's periodisation, the divisions and analogies suggested by Oscar Montelius were also recognised.²⁸

After the First World War, leading European researchers gradually abandoned the Hoernes model and redirected their focus toward elaborating Paul Reinecke's chronological scheme. In Serbia, however, M. Vasić – at that time the only domestic prehistorian – rejected Reinecke's dating methodology as early as 1914, declaring it illogical and inapplicable to the Serbian territory.²⁹ This position effectively stalled the development of a suitable chronological framework for the Bronze and Iron Ages in Serbia throughout the entire interwar period.³⁰

²⁶ Vasić 1977, 3; Vasić 1982; Vasić 1990, 15.

²⁷ Hoernes' Bronze Age was divided into Early (1900–1600 BC), Developed (1600–1300 BC), and Late (1300–900 BC) phases (Hoernes 1898, 72–73, 402–426). The transition from the Bronze to the Iron Age was understood as a slow and gradual process, with iron production spreading from the East – reaching Greece around 1200 BC, Italy around 1100 BC, and Central Europe around 1000 BC, becoming fully established by approximately 800 BC (Hoernes 1898, 438–439). The period between 1100 and 900 BC was designated as the Proto-Iron Age, while the Hallstatt period was further subdivided into an Early phase (900–700 BC) and a Late phase (700–500 BC) (Hoernes 1898, 72–73, 476–495). Hoernes 1898, 72–73, 402–426, 438–439, 476–495; Gabrovec & Čović 1987, 901.

²⁸ Вальтровић 1891, 98–104; Васић 1906, 7. However, we must take into account that in Serbian archaeology there had long existed a certain skepticism regarding the validity of the three-age system of prehistory, since it was believed that the use of iron preceded that of bronze – a view clearly suggested by M. Valtrović (Вальтровић 1887, 8–9).

²⁹ Moreover, Vasić went to the other extreme by identifying Vinča and Žuto Brdo as Ionian colonies on the Danube dating from the sixth century BC (Васић 1907, Vasić 1912, Vasić 1914, Vasić 1932, Vasić 1936, Vasić 1948). Васић 1911, 55–64.

³⁰ Palavestra 2012; Palavestra 2013.

Before the establishment of the first widely accepted chronological and periodisation schemes in Serbia, the pioneering attempts of M. Garašanin and M. Grbić in the general periodisation of prehistory during the years immediately following World War II, are of particular interest.³¹ However, these early efforts did not take deeper root in Yugoslav archaeology and were not further developed. Thus, it can be said that Milutin and Draga Garašanin were the first domestic experts who, during the 1960s, developed a broadly accepted periodisation of the Bronze and Iron Ages for Serbia and North Macedonia.³² Over time, this periodisation scheme underwent cultural-chronological corrections and additions, introduced either by the authors themselves or by later researchers in accordance with the dynamics of new prehistoric discoveries and the advancement of research and analytical methodology. Nevertheless, the principles of this periodisation remained deeply embedded in Serbian archaeology and were officially used for over half a century in Serbia, Montenegro, and North Macedonia. Moreover, with certain revisions and minor additions, the system proposed by M. and D. Garašanin continued to serve as a terminological foundation for the construction of periodisations and chronologies by many subsequent scholars.

Over the course of more than a century of research, the period between the fourteenth and sixth centuries BC in the Morava–Vardar basin has been divided into various chronological sequences, each assigned different terminology. The formulation of chronological schemes (Tab. 1) was influenced by numerous works of domestic and foreign scholars, which complemented and revised one another in accordance with the dynamics of research and archaeological discoveries across the region of South-eastern Europe.³³ Most of the constructed periodisation schemes

³¹ Гарашанин 1948, 68; Грбић 1953, 7–8; Грбић 1955, 21–23.

³² Garašanin 1960; Garašanin 1964; Garašanin 1967, 203–208; Гарашанин 1972, 10–16; Garašanin 1973, 401–409.

³³ Garašanin 1960; Garašanin 1964, 146–148; Garašanin 1967, 203–208; Garašanin 1982, 582–583; Garašanin 1983a, 762, 764–766; Garašanin 1983b, 733; Garašanin 1996; Гарашанин 1972, 10–16; Гарашанин 1973, 401–409, 455–456; Lahtov 1965; Mikulčić 1966, 6–26; Тасић 1967a; Tasić 1971; Tasić 1973; Тасић 1983, 13–14, 77–101, 109–136; Tasić 1971; Tasić 1972; Tasić 1973; Tasić 1976; Тасић 1979; Tasić 1984; Тасић 1987; Tasić 1988; Tasić 2004; Tasić 2005; Tasić 2006; Vinski & Vinski-Gasparini 1956, 57–109; Vinski-Gasparini 1973, 24–64, 142–149; 173–176; Vinski-Gasparini 1983, 566–616; Vasić 1977; Vasić 1987, 536; Vasić 1994; Vasić 1999, 6; Vasić 2003, 8; Vasić 2010, 7–8; Vasić 2015, 7; Васић 1977–1978, 256; Васић 1981, 2; Васић 1997; Медовић 1978, 40; Medović 1988, 386–389, 419–428; Медовић 1994, 46–48; Medović

were based on the chronological positioning of archaeological cultures, with research focus placed on studying their genesis, development, and distribution of material manifestations in order to better define cultural changes, which simultaneously served as chronological markers between two periods or phases.

In constructing periodisation schemes, various authors have applied different terminology and chronological markers to define particular phases. A total of thirteen chronological frameworks, proposed by leading researchers who focused on the period between the fourteenth and sixth centuries BC in the region closely associated with the Morava–Vardar valley, have been identified, in order to gain a clearer understanding of the conceptual division of temporal segments and the application of terminology (Tab. 2). Among these, two schemes exhibit a bipartite division,³⁴ five schemes apply a tripartite division,³⁵ while as many as six schemes distinguish four developmental sub-periods within the studied chronological framework (14th–6th century BC).³⁶ From a terminological perspective, five temporal designations are most frequently used: 1) Middle or Developed Bronze Age, 2) Late Bronze Age, 3) Transitional Period, 4) Early Iron Age, 5) Mature or Developed Iron Age.

The large number of periodisations and terminological distinctions within a relatively short chronological span is the result of differing ap-

& Medović 2010, 17–18, 270–272; Stojić 1986, 89–103; Stojić 1996, 247–256; Stojić 2002; Никитовић et al. 2002; Стојић & Јоцић 2006, 50; Стојић & Чађеновић 2006, 31; Стојић & Јацановић 2010, 52–57; Стојић & Церовић 2011, 55; Jevtić 1993, 395–398; Jevtić 1996; Jevtić 2004; Jevtić 2016; Čičikova 1971, 92; Shalganova & Gotzev 1995, 330–334; Todorova 2003, 295–301; Гоцев 2008, III–III2; Hänsel 1976, 22–24, 88–117, 195–213; Hänsel 1989, 65–77, 107–146, 147–190, 232–304; Hochstetter 1984, 98, 188–194, 200, Abb. 50; Gumă 1993, 101, 133–144; Gumă 1995, 144; Булатовић 2006, 10–11; Bulatović 2007, 59–60, 63–64, 70; Булатовић & Јовић 2010, 44–45; Булатовић & Станковски 2012, 311, 361, 391; Bulatović & Filipović 2017; Bulatović et al. 2021; Митревски 2013, 182–183, 191–194, 220–232; Kapuran 2014, 53–84; Капуран et al. 2014, 38–35; Kapuran, Gavranović & Jovanović 2022; Филиповић 2014, 393–401; Ljuština 2012; Ljuština 2014; Љуштина 2022; Ljuština & Dmitrović 2017; Љуштина 2022, 16–52, 105–109, 126–129, 162–165.

³⁴ Tasić 1967, 212–14; Jevtić 1993; Jevtić 1996.

³⁵ Гарашанин 1972, 10–16; Гарашанин 1973, 401–409, 455–456; Tasić 2005; Tasić 2006; Mikulčić 1966, 6–26; Vinski-Gasparini 1983, 583–616; Kapuran 2014.

³⁶ Hänsel 1976; Hänsel 1989; Vasić 1999, 6–7; Vasić 2003, 8–9; Vasić 2010, 7–8; Vasić 2015, 7–8, Tab. 2; Stojić 1986, 89–103; Стојић & Јоцић 2006, 50; Стојић & Чађеновић 2006, 31; Gumă 1995; Gumă 1997; Medović & Medović 2010, 17–18, 270–272; Bulatović 2007; Булатовић & Јовић 2010, 44–45; Булатовић & Станковски 2012.

proaches, criteria, and interpretations among archaeologists, but also of the dynamic processes characteristic of this phase of prehistory, which are reflected in the archaeological record through significant – yet chronologically insufficiently defined – changes. In addition to these factors, a major technical shortcoming lies in the limited number of excavated sites with preserved stratigraphy, particularly for the period of the Early Iron Age, as well as the insufficient quantity of absolute dates both in the territory of the Morava–Vardar valley and across the broader region of South-eastern Europe.

In recent years, A. Bulatović has been the most active researcher in developing the chronology of the Bronze and Iron Ages in the Morava–Vardar valley. In addition to standard stylistic and typological analyses of archaeological material,³⁷ several absolute dates have also been obtained for horizons from the Late Bronze Age (LBA) and Early Iron Age (EIA) at multiple sites in Serbia.³⁸ According to these analyses, the LBA in the South Morava and Pčinja basins begins in Br C (14th century BC) and continues until the dominance of Gáva–Belegiš II type channelled pottery, that is, the Ha A1/A2 phases. The author emphasises that in some more passive areas (Svinjište, Kokino), features of Bronze Age cultures persist longer, up to the Ha A2/B1 phase, and thus proposes retaining the term LBA for these regions until the beginning of the first millennium BC.³⁹ The Paraćin and Brnjica cultures⁴⁰ are identified as the dominant cultural phenomena in the Morava–Vardar valley from Bagrdan to the Taor gorge, and their relationship should be viewed as a synchronous

³⁷ Bulatović 2008; Bulatović 2009; Bulatović & Stankovski 2012.

³⁸ Bulatović et al. 2018a; Bulatović et al. 2021, Tab. 1.

³⁹ Bulatović & Stankovski 2012, 311.

⁴⁰ The author has devoted particular attention to the Brnjica cultural group, whose development begins (Brnjica I horizon) in the region encompassing the Vranje–Bujanovac basin, as well as the Leskovac and Niš fields. The peak of this group occurred during the Br D–Ha A1 period (Brnjica II horizon), when the culture expanded northward to the confluence of the South and West Morava rivers, and westward to Kosovo via the valleys of the Binačka Morava and Kosanica rivers. The final stage and cultural decline (Brnjica III horizon) took place during the Ha A1/A2 phase, when the bearers of the Brnjica culture withdrew into the hinterlands of the main valleys, primarily into the Pčinja valley, while the old settlements were taken over by groups associated with channelled pottery horizons. Based on absolute dates, it is evident that the Brnjica cultural group existed in the South Morava basin from the fourteenth century BCE (Late Bronze Age, or Br C/D according to Reinecke's chronology) and lasted, at the very least, until the twelfth century BC.

cultural occurrence with frequent interweaving of shared elements.⁴¹ On the other hand, the author considers the introduction of the Mediana group as a distinct cultural phenomenon of the LBA to be unjustified, arguing that the archaeological material from Mediana I cannot be culturally, territorially, or chronologically differentiated, as it corresponds in all elements with the Paraćin and Brnjica cultures.⁴² The end of the Bronze Age is marked by the violent intrusion of groups associated with Gáva–Belegiš II type channelled pottery. Their appearance in the Nišava region is designated as Mediana II and represents a synonym for the period which,⁴³ on a broader Balkan scale, interrupts the long and continuous development of Bronze Age cultures, thereby marking the beginning of the Iron Age.⁴⁴

Bulatović introduced certain chronological adjustments in relation to the periodisation system of M. Garašanin, proposing that the duration of the Bronze Age be extended until the end of the Ha A1 phase, and that the beginning of Iron Age I be shifted to the Ha A2 phase.⁴⁵ The period that followed the collapse of Bronze Age cultures in southern Pomoravlje (Ha A1/A2) and lasted until the stabilisation of Mature Iron Age cultures (Ha C) was defined as a transitional period. It is characterised as a turbulent phase marked by frequent migratory movements, complex cultural manifestations, and the emergence of the first iron objects. The author divided this transitional period (Ha A2–Ha B3) into two horizons. The earlier horizon (Ha A2–B1) is defined by the appearance of channelled pottery, which shows stylistic and typological affinities with ceramics of the Gáva–Belegiš II culture.⁴⁶ During the later horizon (Ha B2–B3)⁴⁷, two cultural areas emerge in the South Morava basin. The northern part is characterised by ornamental motifs produced through stamping and incision techniques, associated with the penetration of the

⁴¹ Bulatović & Stankovski 2012, 361.

⁴² Bulatović 2006.

⁴³ *Ibid.* 10–11.

⁴⁴ Bulatović 2007; Bulatović & Stankovski 2012, 391; Bulatović & Filipović 2017; Bulatović et al. 2021.

⁴⁵ Bulatović & Jović 2010, 44–45.

⁴⁶ Bulatović 2007, 59–60, 63–64.

⁴⁷ For the later horizon of the transitional period, the author proposes the term *Early Iron Age* (Bulatović 2007).

Pšeničevo culture,⁴⁸ while in the south, the Pčinja culture⁴⁹ developed, occupying the Pčinja river basin and the upper courses of the Vardar and South Morava rivers.⁵⁰

In the South Morava basin, the site of Mediana near Niš is the best-researched locality with preserved stratigraphy spanning from the Late Bronze Age (LBA) to the Mature Iron Age (MIA). Already after the first archaeological excavations, Milutin Garašanin was able to distinguish three successive settlement phases, designated as Mediana I–III.⁵¹ Following several revisions, Garašanin synchronised the earliest phase of the Mediana group (Mediana I) (T.X/3–6, T.XI, T.XII/1–6) with the chronological framework corresponding to the Central European Br D phase and the very beginning of the Ha A₁ phase. A somewhat younger horizon, marked by numerous finds of channelled pottery, was labelled Mediana II (T.XIII/7–8, T.XIV–XV) and corresponds to the period encompassing the Ha A₁ and Ha A₂ phases. The youngest phase at Mediana (Mediana III) (T.XVI–XVII, T.XVIII/1–6), characterised by incised and stamped pottery decoration, was equated with the Ha B₁ phase.⁵² Based on this, the settlement at Mediana existed within a time frame between 1300 and 900 BC. Some finds from the site, discovered mostly in disturbed upper layers, suggest that the settlement may have continued into the beginning of the MIA and Ha C phase,⁵³ although this has not been definitively confirmed.⁵⁴

Three samples from the Mediana I horizon were subjected to absolute dating using C₁₄ and AMS methods. The first sample was taken from the area in front of one of the LBA structures, and yielded a date of

⁴⁸ Bulatović 2007, 59–60.

⁴⁹ According to A. Bulatović, this culture is characterised by bowls with indrawn, faceted, or obliquely fluted rims, in some cases with tunnel-shaped handles or obliquely positioned arched handles on the rim, as well as pear-shaped amphorae with flared rims and horizontally placed handles on the body. The most common decorative motifs include oblique and oval punctures, as well as rows of rectangular impressions (Bulatović 2007, 63–64).

⁵⁰ Bulatović 2007, 63–66.

⁵¹ Garašanin 1962, 57; Garašanin 1969, 85; Гарашанин 1973, 307–309; Garašanin 1983a, 762.

⁵² Garašanin 1996, 201.

⁵³ In addition to the vessels bearing elements of the Pšeničevo group, a significant find is a fragmented bronze fibula with a preserved bow and loop, discovered outside the cultural layer during a rescue archaeological campaign in 1975.

⁵⁴ Jevtić 1975, 28.

1280 $\pm$ 90 BC. The second sample was taken from Pit I in quadrant Lj XVII, dated to 1000 $\pm$ 200 BC.⁵⁵ The third sample, tested using the AMS method, was dated to 1380–1271 BC (68.2%) and originates from a house also attributed to the Mediana I phase).⁵⁶ Additional absolute dates from the LBA in the Morava–Vardar valley, such as those from Gradina at Svinjište and Dve Mogili at Pelince, complement the chronological positioning of this horizon to the period between the Br C/D and Ha A2 phases, that is, from the fourteenth century BC through the thirteenth and twelfth centuries BC, and possibly even into the first half of the eleventh century BC.⁵⁷

Based on absolute dates and well-established relative-chronological sequences at several stratified sites, it is reasonable to fix the time span from the early fourteenth to the late twelfth century BC as corresponding to the Late Bronze Age (LBA) in the Morava–Vardar valley. This chronological framework is consistent with a series of absolute dates from southern Macedonia (Greece), where the LBA⁵⁸ at the sites of Kastanas and Assiros is dated between 1365 and 1070/1000 BC.⁵⁹ Within the territory spanning from Bagrdan to the Taor gorge, the period is characterised by material culture that retains strong Middle Bronze Age traditions, which during this time evolved into the recognisable manifestations of the Paraćin and Brnjica cultural groups.

Despite numerous discussions and proposals, a definitive consensus has yet to be reached regarding the conventional beginning of the Iron Age in the Central Balkans. Various, sometimes even conflicting views have been expressed through numerous chronological schemes that employ different terminologies. From a technological perspective, the utilitarian role of bronze in tool and weapon production was not abruptly replaced by iron. Therefore, the most common disagreements among scholars concern the chronological placement of the so-called transitional period between the Bronze and Iron Ages. This transitional phase is generally understood as a time during which the full metallurgical traits of the

⁵⁵ Coles & Harding 1979, 452.

⁵⁶ Булатовић 2008; Bulatović et al. 2018.

⁵⁷ Bulatović et al. 2018, 124, tab. 1.

⁵⁸ According to the established periodisation for continental Greece, this corresponds to the time span from the Late Helladic IIIB phase to the end of the Sub-Mycenaean and the beginning of the Protogeometric period.

⁵⁹ Weninger & Jung 2009; Facorellis 2015.

Iron Age are not yet fully developed, but in contrast to the Bronze Age, marked changes in many aspects of material culture are clearly evident.

A majority of scholars (9) recognise the existence of a transitional period between the Late Bronze Age (LBA) and the Mature Iron Age (MIA), which, in the works of some authors (5), is further subdivided into two sub-phases – typically designated as the transitional period and the Early Iron Age, or alternatively, as the earlier and later horizons of the transitional period. Depending on the author, the duration of the transitional period may range from 500 to 200 years if both horizons are included, from 300 to 100 years for the earlier horizon alone, or from 200 to 300 years in the case of the later horizon, that is, the Early Iron Age.

Regardless of the specific terminology employed in periodisation schemes, a considerable number of researchers agree that the initial marker of broader cultural changes is the appearance of the developed form of channelled burnished pottery.⁶⁰ In the domestic literature, this phenomenon is most often associated with the not clearly defined Gáva cultural complex or style, upon which the development of Iron Age cultures in the Morava–Vardar valley began.

Since the phenomenon of grooved pottery represents a long-term occurrence lasting approximately half a millennium in the Carpathian basin,⁶¹ it is necessary to consider the period in which it appears in the Morava–Vardar valley. For the chronology of grooved pottery, important reference sites include those in northern Greece such as Kastanas, Vergina, Assiros (Gvozdevo), Sindos, and Kastrá on Thasos, as well as sites in eastern Macedonia, Thrace, and Troy. In Kastanas, grooved motifs first appear in layer 13 (1%)⁶², but their highest concentration is recorded in layer 10 (17.6%), followed by layers 11 (10.4%) and 9 (10.9%), all of which are assigned to the Protogeometric period.⁶³ B. Hänsel originally dated layers 10 and 9 to horizon KVI or the Early Iron Age (1000–800 BC),⁶⁴ but subsequent revisions accompanied by absolute dates have also included layer 11 in this period, thereby extending the upper chronological

⁶⁰ Tončeva 1980, 119–136; Vinski-Gasparini 1983, 606–607; Tasić 1983, 104–106; Hänsel 1989, 190–232; Medović 1994; Gumă 1995; Nikitović 2003, 20; Bulatović 2007; Булатовић & Станковски 2012: 309–311; Wardle & Wardle 2007, 471–472.

⁶¹ Sava & Ursuțiu 2021, fig. 19.

⁶² The percentages indicate the total proportion of fluted pottery within the given layer.

⁶³ Hochstetter 1984, 188–194, Abb. 50, T. 76/1, 2, T. 78/1–3, T. 82/5–7, T. 88/3, 4.

⁶⁴ Hänsel 1989, 190–232.

boundary of the Early Iron Age by approximately half a century.⁶⁵ According to excavations at Vergina, grooved pottery appears during phases II and IIIA, which are generally associated with the tenth century BC.⁶⁶ A similar chronological position has been suggested for other sites in northern Greece (Sindos, Assiros) that also yielded horizons with grooved pottery,⁶⁷ creating the impression that its highest prevalence can be dated to the tenth century, that is, between the eleventh and ninth centuries BC.⁶⁸ A horizon with grooved pottery is also recorded at Troy VIIb2, which is dated to the mid-eleventh and the entire tenth century BC.⁶⁹

On the other hand, M. Gumă considers the Gáva group a cultural manifestation from the beginning of the Iron Age which, in its developed phase – characterised by black burnished grooved pottery – can be placed between the second half of the eleventh and the first half of the tenth century BC. He notes, however, that the recognisable features of the Gáva culture, especially outside its core territory, also appear during the Ha B2–B3 phases, and even up to the beginning of the Ha C phase.⁷⁰ A collection of absolute dates from various sites in the Carpathian basin associated with the grooved pottery horizon confirms its presence from the sixteenth to the ninth century BC,⁷¹ with the observation that horizons with developed Gáva ceramics are dated between the second half of the eleventh and the beginning of the eighth century BC.⁷² This contrasts with a number of earlier so-called pre-Gáva complexes, such as the Cruci–Belegiš IIa culture, whose overall span is dated to the thirteenth and twelfth centuries BC, within which the Paraćin II culture likely also belongs.⁷³

Late dating of Gáva ceramics in Serbia has also been suggested by some domestic researchers, who have pointed out at least short-term synchronisms between Late Gáva and Early Kalakača.⁷⁴ Furthermore, there is an opinion that classical Kalakača pottery represents a product of

⁶⁵ Weninger & Jung 2009; Facorellis 2015.

⁶⁶ Andronikos 1969.

⁶⁷ Wardle et al. 2014; Gimatzidis & Weninger 2020.

⁶⁸ Pare 1999, 417–418.

⁶⁹ Blegen et al. 1958; Blegen 1963, 165–174, 412.

⁷⁰ Gumă 1993, 181–194; Gumă 1995, 111–112.

⁷¹ Sava 2019.

⁷² Sava & Ursuțiu 2021, 102–104, Tab. 9.

⁷³ Sava 2019, 114–115; Molloy et al. 2020, Tab. 3.

⁷⁴ Roeder 1991; Garašanin 1996; Medović 1994; Tasić 2005, 12

natural evolution arising from the developed forms of Gáva ceramics.⁷⁵ Although the Gáva cultural phenomenon originated in its core area around the upper Tisza, southern Ukraine, and northern Moldova, where it can be associated with a chronological context of the fourteenth–thirteenth centuries BC,⁷⁶ its occurrences outside this region are often significantly later in date.⁷⁷ It is assumed that its spread into the Carpathian basin began sometime around the transition from the thirteenth to the twelfth century BC, and based on absolute dates, its presence in Transylvania is documented from the beginning of the eleventh to the end of the ninth century BC.⁷⁸

Based on ceramic material, it appears that the most significant influx of grooved pottery into the South Morava and Vardar basins occurred only in its late developed form, unlike in Vojvodina, the Danube region, and possibly the Great Morava valley, where earlier stages of this pottery tradition are more prominently represented. This conclusion is also supported by the extremely rare presence of grooved pottery in the Mediana I horizon,⁷⁹ in contrast to the subsequent Mediana II horizon, where its expansion becomes evident and continues significantly into the Mediana III horizon⁸⁰. A similar pattern has been observed at Konopljara near Kruševac,⁸¹ Hisar near Leskovac,⁸² as well as at Ranutovac and Končulj.⁸³

⁷⁵ Medović 1989; Medović 1994.

⁷⁶ Metzner-Nebelsick 2012, 66–68

⁷⁷ Gumă 1995.

⁷⁸ Ciugudean 2012, fig. 14; Sava & Ursuțiu 2021.

⁷⁹ Bulatović 2008, fig. 3–6.

⁸⁰ Based on the stratigraphic documentation and material from the 1962 excavation campaign – which is likely the best-documented campaign at Mediana – several observations were made. Horizon II at Mediana is relatively thin, with an average thickness of 20–30 cm, nowhere exceeding 50 cm, and does not contain any closed features. This contrasts with the older Horizon I, which averages 1 m in thickness and includes several enclosed units, and with the younger Horizon III, which was disturbed by interventions during Antiquity and is therefore not clearly defined (Garašanin 1969, plans I–III). Given this situation, after the first excavation campaign, Garašanin was able to clearly distinguish and define only two horizons at Mediana: namely, Mediana I and II (Garašanin 1969, 88). It was not until the 1972 campaign that the existence of Mediana III was established, and only in the southern part of the site (Гарашанин 1973), for which no detailed stratigraphic documentation is currently available.

⁸¹ Stojić & Čađenović 2001.

⁸² Stojić 2001; Bulatović 2007, 58–60.

⁸³ Bulatović & Stankovski 2012, 115; Bulatović et al. 2021, T. VII–X.

The late phase of grooved pottery in the Mediana II horizon is further confirmed by the presence of incised ornaments, which appear either independently or in combination with grooves, and would become the dominant decorative element in the subsequent phase. Grooved pottery accompanied by incised ornamentation has already been recorded in the inventory of Belegiš IIb (Belegiš–Gáva) ceramics, particularly in horizons at Kalakača and Batka S,⁸⁴ and is probably best documented at Feudvar, specifically in horizon 16 on the Titel plateau.⁸⁵ Identical combinations of ceramic ornamentation have also been noted at the sites of Mediaș, Insula Banului, Kalakača, and Boljetin.⁸⁶

The forms and decorative elements encountered in the Mediana II horizon, at Hisar near Leskovac, and Konopljara near Čitluk are, according to M. Gumă, mostly associated with cultural groups such as Ticvaniu Mare–Karaburma III, Vučedol–Novi Bečej, Hinova–Mala Vrbica, Zimnicea–Novograd, and Gáva–Mediaș, dating to the transition from the second to the first millennium BC, that is, between the Ha A2 and Ha B1 phases. In Transylvania and Banat, ornamentation that includes developed forms of grooving, such as garland motifs or fluted tongue handles, combined with incised decoration, has been defined as Gáva II and dated to the post-1050 BC period, as confirmed by the presence of such ceramic types at Troy VIIb2.⁸⁷ This combined ornamentation is clearly present in Horizon II at Mediana, Konopljara near Čitluk, Hisar near Leskovac (Hisar IIa), and the site of Meanište near Ranutovac, where grooving appears alongside simple horizontal incisions, rows of hanging triangles, or elongated triangular notches – elements that would dominate pottery decoration in the Morava–Vardar valley until the beginning of the Mature Iron Age (MIA). The few available absolute dates from southern Pomoravlje, obtained from layers with grooved pottery at the sites of Hisar near Leskovac (features 7 and 25) and Meanište near Ranutovac (features 3b–c, 26, 45), generally support this chronological framework.⁸⁸

⁸⁴ Medović 1994, 47.

⁸⁵ Falkenstein 1998, 293–294.

⁸⁶ Morintz & Roman 1969, fig. 12–15; Zaharia 1965, 87, fig. 1–8, 11; Medović 1988; Jevtić 1981, 30, T. VI–X.

⁸⁷ Hänsel 1976, 44–48; Medović 1989; Медовић 1994; Szabó 1996; Pankau 2004; Ciugudean 2012, fig. 6–8, 14.

⁸⁸ Bulatović et al. 2021, tab. 1.

At the southernmost end of the Morava–Vardar valley, in Kastanas, statistical analyses indicate that grooved pottery reached its highest frequency during the Early Iron Age, specifically in layers 11–9, dated to the eleventh–ninth centuries BC. It is also noteworthy that at both Feudvar and Kastanas this horizon is associated with significant changes, particularly in settlement organisation and dwelling structures.⁸⁹

Similar chronological conclusions were supported by G. Tončeva, who placed the beginning of the Iron Age in Bulgaria in the mid-eleventh century BC, associating the end of the Bronze Age with the appearance of grooved and buckel pottery (Ger. Buckelkeramik).⁹⁰ At the systematically excavated sites of Balej and Magura, three habitation horizons were identified, spanning from Ha A2 to the end of the Ha C phase. According to estimates, the earliest horizon (III) lasted only about fifty years (1100–1050 BC) and is characterised by the dominance of grooved pottery with a sparse presence of incised motifs. The beginning of the middle horizon (II) is dated to the second half of the eleventh century BC and is attributed to the *Insula Banului* group, which is distinguished by a combination of incised and inlaid motifs alongside a significant presence of grooved ornamentation. The youngest horizon (I) is represented by the typical features of the *Basarabi* style.⁹¹

A series of absolute dates places the beginning of the Early Iron Age horizon at Kastanas, Sindos, and Assiros between 1070 and 1000 BC, with its continuation until the end of the ninth century BC.⁹² A similar chronology is supported by absolute dates from Thrace, based on which it has been proposed that the Early Iron Age (I) be placed between the beginning of the eleventh and the end of the tenth century BC, while the Mature Iron Age (II) is proposed to span from the ninth to the seventh/sixth century BC.⁹³

However, of greatest significance for the region under study are still the rare absolute dates obtained for the *Gornea–Kalakača* group, which currently place its existence within the time frame between 900 and 800

⁸⁹ Hänsel 1989, 190–232; Falkenstein 1998, 294, fig. 239.

⁹⁰ Tončeva 1980, 119–136, fig. 129.

⁹¹ Shalганова & Gotzev 1995, 328–330, Fig. 2–4.

⁹² Weninger & Jung 2009; Wardle et al. 2014; Gimatzidis & Weninger 2020.

⁹³ Nekhrizov & Tzvetkova 2018, 37, tabs. 5–6.

BC.⁹⁴ On the other hand, the end of the Kalakača horizon could be associated with a date from the collective grave at Gomolava, which has been dated to the middle of the eighth century BC, more precisely to 730 ± 60 BC.⁹⁵

It remains unclear whether the bearers of the Gáva style during its expansion phase (Gáva II) in the Balkans had knowledge of iron processing, especially considering that they are almost always precursors to cultural changes upon which groups with confirmed iron metallurgy are subsequently built. Regardless of the uncertainty as to whether the developed occurrence of grooved pottery in the Morava–Vardar valley should be linked to knowledge of iron smelting, we believe that this horizon marks significant social and cultural transformations, from which the clearly defined cultural manifestations of the Mature Iron Age (MIA) would soon emerge. The emergence and duration of this transitional phenomenon likely took place over a relatively short time span, probably within a single century, or perhaps even half as long.

Taking into account all the arguments for defining a chronological framework of cultural transformations at the end of the Bronze Age, as well as data on the earliest use of iron in the geographical context of Central Europe and the Balkans, a range of divergent perspectives emerges. These viewpoints highlight different markers of change – whether cultural, settlement-based, funerary, or technological – placing them within a time span that stretches from the thirteenth to the eighth century BC. Although a series of absolute dates from neighbouring regions is still insufficient to fully illuminate the dynamics and course of cultural change, recent research has increasingly emphasised the decades around 1200 BC, identifying the twelfth century as a climatic stage marked by significant environmental changes that triggered a broader wave of cultural and social transformations.⁹⁶

Based on the discussion above, it may be concluded that the Morava–Vardar valley experienced a dynamic phase of cultural transition between the end of the twelfth and the beginning of the tenth century BC, which should be defined as a distinct chronological period. This timeframe corresponds well with the currently sparse absolute dates from

⁹⁴ Molloy et al. 2020, Tab. 3.

⁹⁵ Tasić 1988, 53–57.

⁹⁶ Molloy 2022.

southern Pomoravlje, particularly from sites near Leskovac and especially from Ranutovac near Vranje, which yielded stratified contexts with grooved pottery.⁹⁷

The term Early Iron Age has been accepted as the most appropriate designation, given its established use in Serbian archaeology,⁹⁸ where it serves to differentiate this formative phase from subsequent, more developed stages of the Iron Age, often labelled as Mature Iron Age (MIA) or Iron Age II. It is also important to note that this terminology has long been widely accepted in neighbouring countries as well as among English-speaking scholars.

The Early Iron Age should be understood as a turbulent period marked by pronounced cultural transformations, during which the use of iron and its metallurgy emerged and gradually developed. This process is archaeologically documented in only a limited number of cases from the eleventh to the tenth century BC, primarily at sites in Greece,⁹⁹ Bulgaria,¹⁰⁰ and Romania.¹⁰¹ In contrast,¹⁰² finds of early iron objects in Serbia remain subject to debate.¹⁰³ Nevertheless, this is the period during which the following cultural groups emerged or flourished: Gornea–Kalakača, Gáva II, Insula Banului, Babadag, Pšeničevo, Mediana II–III, and Pčinja.

The subsequent period, both in Serbia and across the broader territories of the Balkans and Pannonia, has traditionally been associated with the dominance of the Basarabi-style cultural repertoire. Extensive research by M. Jevtić has demonstrated that the earliest phase of the Basarabi culture (Phase I) can be linked to the developmental phase of the Insula Banului group within the Mature Iron Age (MIA), dated to 850–750 BC, when its presence was confined to the Danube region around the Iron Gates. The following, more developed phase (750–600 BC), represents a period of rapid cultural expansion and the formation of the Basarabi complex. This was a time of consolidation and unification of multiple cultural groups under a shared stylistic tradition which, ac-

⁹⁷ Bulatović et al. 2021.

⁹⁸ Medović 1978; Vasić 2015.

⁹⁹ Waldbaum 1978; Lemos 2002, 122.

¹⁰⁰ Bozhinova 2008, 47–48.

¹⁰¹ Boroffka 1987.

¹⁰² Stojić 2002.

¹⁰³ Kapuran 2018, 13–14.

according to Jevtić, arose as a political response to external threats.¹⁰⁴ During this period, regional variants of the Basarabi complex can be identified, such as Bosut–Basarabi, Vajuga–Moldova, Belačevac I, and the slightly later group characterised by tremolo-decorated ceramics from Crvena Livada–Sofronievo. This is also the period that can be equated with the chronological framework of the Mature Iron Age, specifically the Ha B3/C1 to Ha C2 phases in the Central European periodisation, or with the Late Geometric (750–700 BC) and Proto-Archaic/Orientalising (700–600 BC) periods in the Aegean.

The end of this period is marked by the decline of Basarabi cultural influence, followed by the fragmentation of the complex and the emergence of several related cultural groups that continued developing independently. The appearance of the channelled ceramic horizon of the Bosut group, along with the emergence of the Zlot, Belačevac II, and Ferigile cultures, signifies the conclusion of the earlier phase of the Mature Iron Age in the Central Balkans. These cultures persisted during the final stage of the Early Iron Age, corresponding to the entire Ha D phase in the Central European chronology or the greater part of the Archaic period in the Aegean.

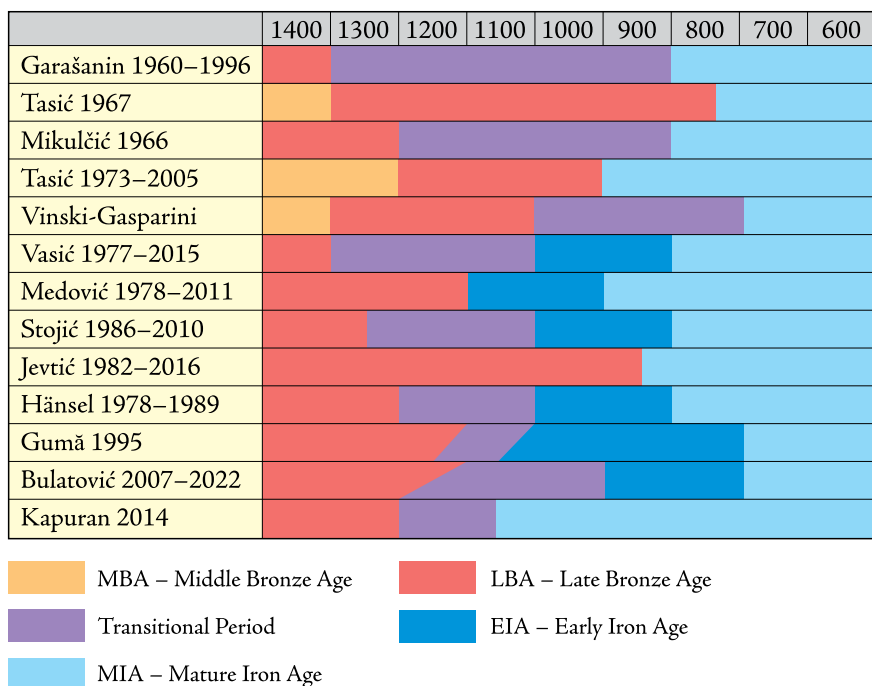
Based on all presented arguments, it can be concluded that the chronological span between the fourteenth and sixth centuries BC in the Morava–Vardar valley is most realistically divided into three horizons. Each horizon is distinguished by specific features in material culture and varying technological levels, as well as by changes in settlement patterns, social organisation, and spiritual practices. The chronological positions of these horizons are expressed in approximate absolute dates, with an assumed and acceptable margin of ± 50 years depending on regional variation (see Table 3). The proposed stages broadly correspond to the chronological frameworks put forward by M. Gumă and A. Bulatović.

¹⁰⁴ Jevtić 1993, 394–395; Jevtić 2016, 13.

God.	Central Europe ¹⁰⁵	Garašanin (1973)	Vasić (2015)	Medović (2011)	Stojić (2010)	Bulatović (2007–2022)	Hänsel 1989	Gumiä 1995	Hellas								
1400	Br C1	LBA	LBA	LBA	LBA	LBA	LBA K IV	LBA	LH IIB								
1350	Br C2								LH IIIA								
1300	Br D	Iron Age I	Transitional period	Iron Age Ia	Iron Age Ib	Transitional period – Early Iron Age I	Transitional per. K V	LH IIC	LH IIIB								
1250										Ha A1							
1200	Ha A2									Transitional period	Iron Age Ib	Iron Age Ic	EIA	EIA K VI	MIA K VII	MIE K VIII	Historical period K IX
1150																	
1100	Ha B1									EIA	Iron Age Id	Iron Age IIa	MIA Iron Age II	MIA Iron Age III	Laten		
1050																Ha B1	
1000	Ha B2									EIA	Iron Age Id	Iron Age IIa	MIA Iron Age II	MIA Iron Age III	Laten		
950																Ha B2	
900	Ha B3									EIA	Iron Age Id	Iron Age IIa	MIA Iron Age II	MIA Iron Age III	Laten		
850																Ha B3	
800	Ha C1 Ha C2									Iron Age II	Horizont 1	Bosut (Kalakača)	Iron Age Id	Iron Age IIa	MIA Iron Age II	MIA Iron Age III	Laten
750																	
700	Ha D1									Iron Age III	Horizont 2	Bosut IVb (Basarabi)	Iron Age IIb	MIA Iron Age II	MIA Iron Age III	Laten	
650																	Ha D1
600	Ha D2	Iron Age III	Horizont 3	Bosut IVc (Fluted Pottery Horizon)	Iron Age IIIa	MIA Iron Age III	Laten										
550								Ha D2									
500	Lt A	Iron Age III	Horizont 4	Bosut IVc (Fluted Pottery Horizon)	Iron Age IIIb	MIA Iron Age III	Laten										
450								Lt A									
400	Lt B	Iron Age III	Horizont 4	Bosut IVc (Fluted Pottery Horizon)	Iron Age IIIc	MIA Iron Age III	Laten										
350								Lt B									
300	Lt B	Laten	Laten	Laten	Laten	Laten	Laten	Laten									

Tab. 1. Relative-Chronological Schemes for the Period from the 14th to the 3rd Century BC According to Various Authors

¹⁰⁵ Modified Reinecke's Relative-Chronological Periodisation of the Iron Age for Central Europe (Gerloff 2007; Kristiansen 1998, 31–35; Gabrovec & Čović 1987; Müller-Karpe 1959)



Tab. 2. Periodization Schemes, Terminology, and Chronology for the Period from the 15th to the 5th Century BC According to Various Authors

Central European chronological markers	Conventional name	Abbreviation	Chronological span
Br D – Ha A1/2	Late Bronze Age	LBA	1400 – 1100
Ha A2 – Ha B3	Early Iron Age	EIA	1100 – 750
Ha B3/C1 – Ha C2	Mature Iron Age	MIA	750 – 600

Tab. 3. Terminology and Periodisation Applied in This Study for the Period from the 14th to the 6th Century BC

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Barry Molloy*

*University College Dublin
School of Archaeology
Dublin, Ireland*

Katarina Dmitrović**

*National Museum
Čačak, Serbia*

Challenges of the Bronze Age Chronology in Western Serbia. The case study of cremation graves from Dubac in Jančići

Abstract: The paper discusses the Late Bronze Age (LBA) cremation burials from the tumulus necropolis at Dubac in Jančići, near Čačak in western Serbia, in social and chronological perspective. Cremation burials are rarer than inhumations in this region and so we focus on five well-stratified examples from Dubac. These were buried with Belegiš style vessels, indicating cultural connections with areas to the north where that pottery style and cremation burial in flat cemeteries were both commonplace. Given these connections, our objective in this paper is to better resolve the onset and ending of cremation as a mortuary rite in LBA western Serbia and to evaluate how it reflects continuity and change in this region. Specifically, we explore the similarities and differences in the processing and deposition of cremation burials in the context of tumulus monuments. Important connections between this mortuary rite and depositional contexts are discussed, including the creation of cremation pyres upon the surface of tumuli in the same location as subsequent interments. Combining stratigraphic analysis, material culture studies and ¹⁴C dates from inhumation burials, we define chronological parameters for the use of cremation in this cemetery. We demonstrate that cremation came into use by the later 15th or 14th century BC and lasted until at least the 12th century BC. This reveals that it took place early within the reuse of the ceme-

* barry.molloy@ucd.ie

** katarina.dmitrovic@gmail.com

tery at Dubac, though possibly not at the very beginning of its LBA phase, and continued until the last burials were interred within this tumulus cemetery.

Key words: Dubac in Jančići, Late Bronze Age, tumuli, cremation graves, absolute and relative chronology

Introduction

The work of Nikola Tasić, to whom this volume is dedicated, played an important role in establishing the foundation for Bronze Age research in the southern Pannonian plain and adjacent areas. In his work, he defined a distinct Belegiš ceramic style as characteristic of the Late Bronze Age (LBA) in the province of Vojvodina. He further argued that the ceramics from Western Serbia were related in form and chronological development to this style, linking societies north and south of the Sava–Danube river corridor and covering the transition from the Middle to the Late Bronze Age.¹ The impact of his frameworks has been long lasting. Indeed, through Tasić's support and influence, a younger generation of scholars working on western Serbian assemblages have refined the chronology and connections between societies of this wider area.

With this in focus, the latest set of ¹⁴C dates from Dubac in Jančići, a tumulus necropolis to the north-west of Čačak (**fig. 1**), helped to resolve the chronological development of this cemetery, enabling better definition of patterns in burial rites and bronze and ceramic material culture against absolute dates.² Founded in the Early Bronze Age (EBA),³ this tumulus necropolis was used once more in the second half of the second millennium BC. This was a period of repeated interments within the tumuli. The ¹⁴C dates from closed contexts defined here are overlapping throughout the life of the cemetery, though at least two successive phases, potentially separated by only a few years, are documented based on stratigraphy in Mound 3.⁴

The importance of Dubac lies in the good preservation of human remains and the variety of grave goods in direct stratigraphic association. Through cross-referencing absolute dates of the former with the relative

¹ Tasić 1974; Тасић 2002, 171–172.

² Dmitrović & Molloy 2025.

³ Никитовић 1999; Dmitrović 2016; Dmitrović & Molloy 2022.

⁴ Dmitrović & Molloy 2025.

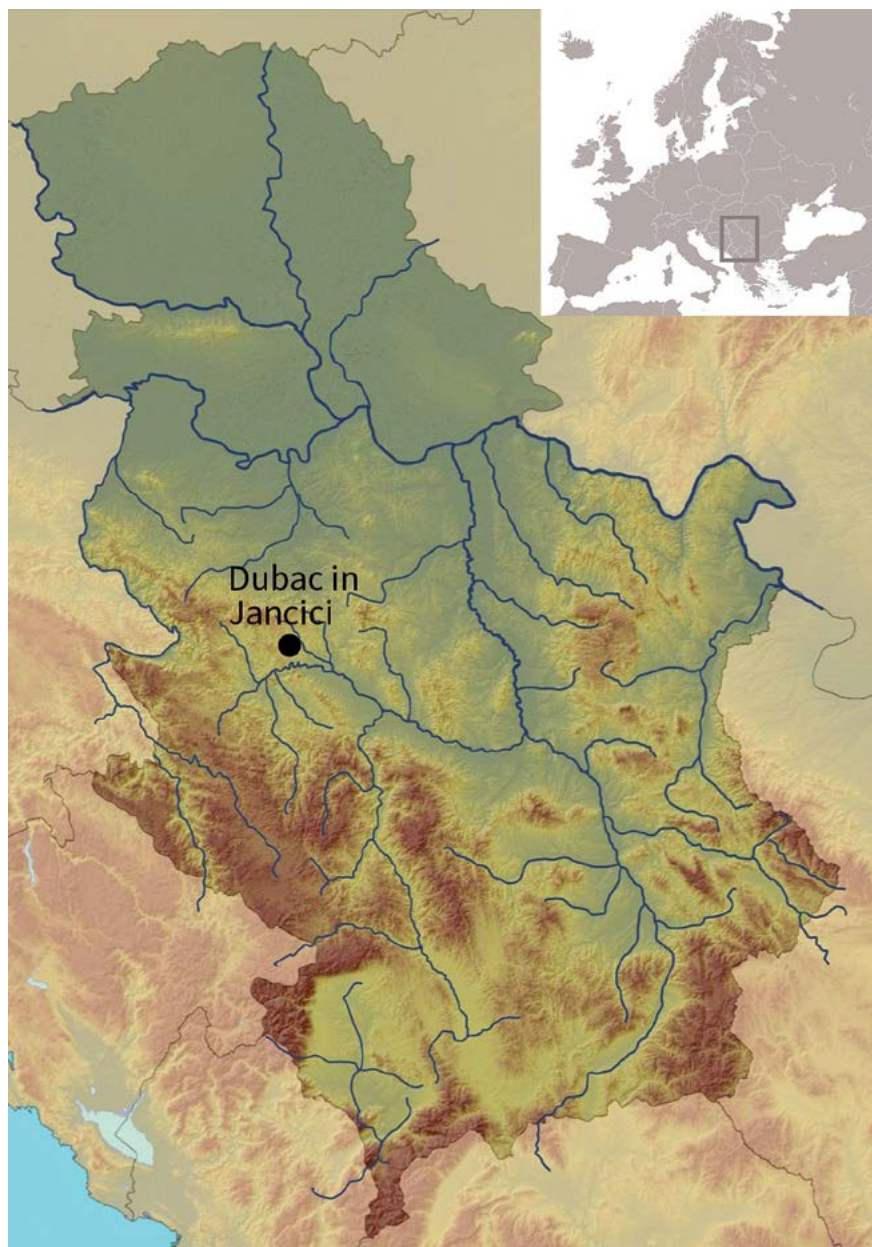


Fig. 1 – Map of Serbia with Dubac cemetery indicated.

chronologies of the latter, we have refined the sequences of activity at this cemetery and explored their relevance for archaeological activity and ceramic and metalwork typo-chronologies for the surrounding area.⁵ We obtained ¹⁴C AMS dates from inhumation burials, while a sample from a cremation grave failed. Using the refined dating of the inhumation graves, we aim here to provide a more precise chronology for cremation burials at this site. These are less numerous in comparison to the inhumations, but they are sufficient in number to define the cemetery as being bi-ritual, particularly in its latest phase. We focus on the cremation graves and their relationship to better lock down their chronology, taking account of the refined dating of material, both bronze and ceramic, for this site together with stratigraphic relationships / positioning. This comparative approach provides a relatively tight date range for specific cremation burials, several of which used amphorae and beakers of the Belegiš type as containers for cremated bones. This shape of vessel was in use in the Belegiš I (ca. 1600–1400 BC) and II (ca. 1425–1200/1150 BC) phases, more commonly in the latter, with the decorative schema being the most notable change between the phases. With this in focus, a further aim of our paper is to consider the ceramics with Belegiš characteristics from Dubac and from other sites in western Serbia to better refine ceramic typo-chronologies in this area, and through this to better resolve the timing of key social developments.

Cremation graves at Dubac

Although inhumation burials were more numerous, cremation burials were placed into tumuli I, II, VII and VIII.⁶ There were two formats to these burials, one with the cremated bones being placed in urns prior to interment, and the other with the cremated bones being placed directly into the soil of the tumulus. However, in the latter case, preservation may be an issue (e. g. late disturbance) and in some cases it is also possible that the bones had originally been placed into a fabric wrapping or an organic container (made of leather or wood, for example).

Cognisant that this differentiation may reflect a modern bias, we look to the context of these two categories of cremation burials. Those

⁵ Dmitrović & Molloy 2025.

⁶ Dmitrović 2016, 60–84.

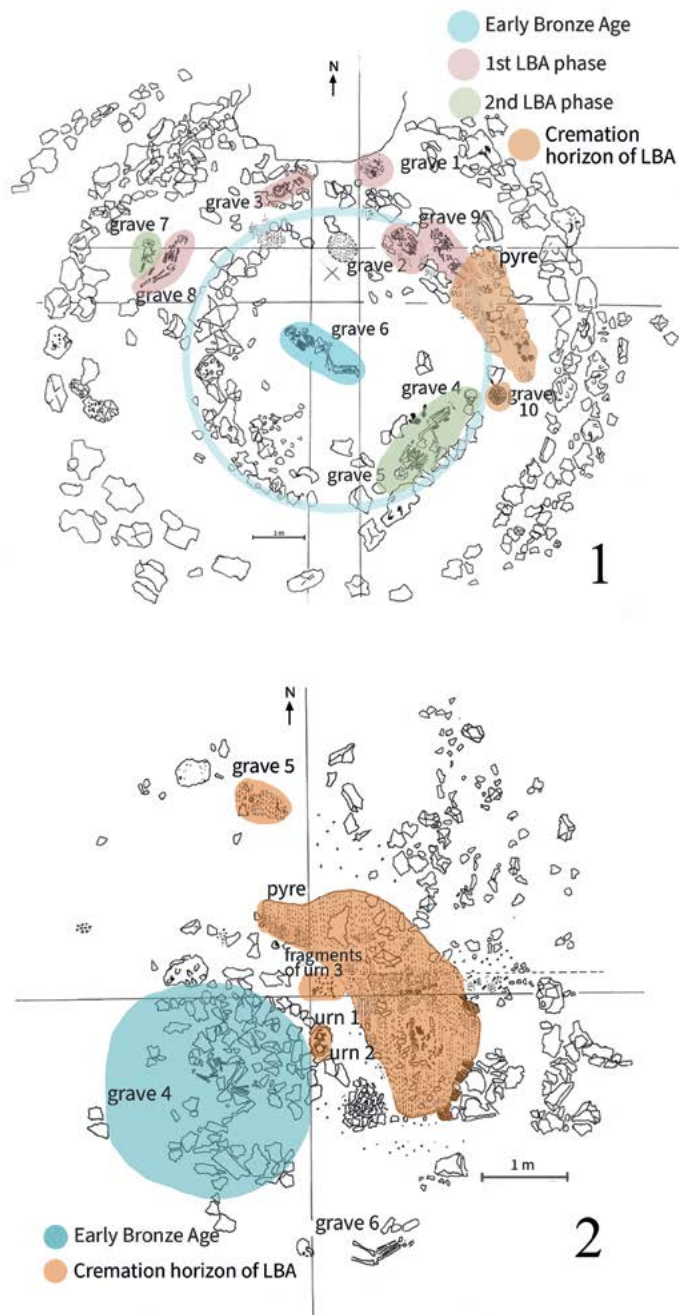


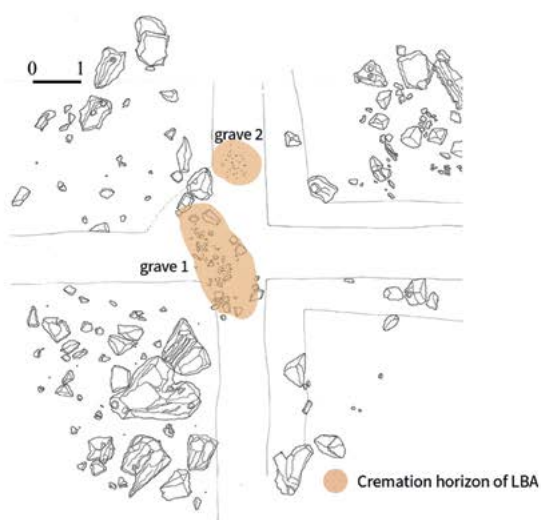
Fig. 2 – Plans of tumuli I and II at Dubac (adapted after Никитовић 1999 and Dmitrović & Molloy 2025).



1



2



3

Fig. 3 – 1 – Pyre on Mound II; 2,3 – Mound VII (based on documentation from the National Museum in Čačak; adapted after Dmitrović 2016).

placed into ceramic amphorae are: Grave 10 from Mound I; Graves 1, 2, and 3 from Mound II; and Grave 3 from Mound VII. The second group lacking a ceramic vessel are: Grave 5 from Mound II, and Graves 1 and 2 from Mound VII (Fig. 2 and 3). Mound VIII had been damaged substantially prior to excavation work and it is not fully clear how cremation burials had been deposited there. It is likely that Graves 1, 2, and 4 had been placed into an urn originally. It is also possible, however, that the ceramic sherds apparently associated with the burials represent vessels that had accompanied, but not contained, the cremated bones.

Ceramics

Two types of vessel shape were commonly used to contain cremated bones in burials: amphorae with two or four small handles on the widest part of the belly, and beakers with two handles connecting the belly and the rim. In both cases, bones were contained within the vessel, irrespective of the vessel size.

The amphorae are characterised by having a rounded S-profiled belly, with two or four ribbon-like handles, a flat base that was not sharp-



Fig. 4 – Cremation graves from Mound II: 1-3 – Grave 1; 4 – Grave 3; 5 – Grave 5 (after Никитовић 1999 and documentation of the National Museum in Čačak).

ly defined, and a wide conical neck. The fabric of these vessels was commonly clay tempered with sand, and it was fired on the interior and exterior to an orange/brown and light brown colour. These hand-made vessels had slight asymmetries that gave them a somewhat rough appearance, though they had well-burnished surfaces. Two examples were recovered from Dubac, one each from Graves 3 and 1 in Mound II (Fig. 4/1,3,4). In this latter burial, a cup with a slightly biconical belly, wide vertical neck, and a handle connecting the shoulder and the rim, was placed inside the beaker (Fig. 4/2). The fabric, firing, and surface treatment are similar to the amphorae and the beakers.

Beakers were also used as urns, and these were commonly biconical in shape, with wart-like plastic decoration on the belly. The foot of these vessels is conical, the rim rhombical in shape, and they had two ribbon-like handles connecting the belly to the shoulder. Volute-like continuations of the tops of the handles extend past the rim. Channel decoration occurs on the neck and on the belly of these vessels. The fabric is similar to that used for the amphorae, with the clay being tempered with fine sand and the vessels being fired to a light-brown to dark brown colour, with a burnished surface. This shape of vessel came from three graves at Dubac – Grave 10 from Mound I, Grave 2 from Mound II, and Grave 3 from Mound VII (Fig. 5).

Metal items

Bronze items were less commonly recovered from cremation burials than from inhumation burials at this cemetery. The cremation with the greatest quantity of metalwork was Grave 10 from Mound I. This assemblage consisted of a torc, two spectacle-shaped pendants, eight hair rings, eight cone-shaped tutuli, and 22 smaller calotte-shaped objects with a small diameter that were made from rolled, thin sheet bronze (Fig. 5/3).⁷ The next most well-furnished burial was from Grave 5 from Mound II. This contained a tutulus, six small calotte-shaped objects, and two hair rings (Fig. 4/5). A few fragmented hair rings were also found inside Urn 3 from Mound II.⁸ Greenish stains on cremated bones from the central burial in Mound VII demonstrate that some bronze items had been deposited in this burial, but that they were subsequently completely de-

⁷ Dmitrović 2016, 68–69; Figs. 46, 48.

⁸ *Ibid.*, 72, 74.



Fig. 5 – Cremation graves with urns in the shape of beakers:

1–3 –Mound I, Grave 10;

4–5 –Mound II, Grave 2;

6 –Mound VII, Grave 3

(after Никитовић 1999; Dmitrović 2016 and documentation of the National Museum in Čačak).

stroyed by corrosion, so that no solid metal was recovered from this cremated bone deposit.

Stratigraphical and chronological issues

Mound I was established during the EBA as demonstrated by the ^{14}C dating of the central inhumation burial Grave 6, to 2581–2466 cal. BC (94.3%). Subsequently, around one thousand years later, this tumulus was remodelled and reused during the LBA. Inhumation burials in Graves 2 to 9 define a sequence of re-use spanning at least decades and potentially up to three centuries.⁹ Graves 3, 4, 5, 7, 8, and 9 were arranged broadly in a circle around the central Grave 6. These were all dated using ^{14}C AMS from the beginning of the 15th to the end of 13th century cal. BC.

⁹ Dmitrović & Molloy 2025.

Built directly into the body of the E–NE part of the tumulus, traces of a cremation pyre were detected during excavation. This was oriented NW–SE on its long axis and it measured 3 x 1.1 m (**Fig. 2/1**). The creation of the pyre disturbed the inhumation burials in Graves 2 and 9. Together with evidence of burning, a small amount of cremated bones was recovered from the surface level upon which the cremation pyre would have stood.¹⁰ At the southern edge of this pyre, cremation Burial 10 was deposited. The urn had been dug into the soil interior of the mound, but there were no traces of ash or charcoal consistent with the cremation debris within the fill or around the NE part of the stone structure that had served as a covering for the double Grave 4 and 5. Excavation records do not reveal any disturbance of this stone grave structure as a consequence of making and using the cremation pyre.¹¹ This may suggest that it was recognised as a marker for Graves 4 and 5 at the time the pyre was in use, or that other markers for Graves 4 and 5 were preserved and visible at the time the pyre was created. If so, the ¹⁴C date for Grave 4 Mound 1 (1415 BC–1287 BC (95.4%)), and Grave 5 Mound 1 (1416 BC–1282 BC (95.4%)) are important for defining its relative chronology through this stratigraphic relationship. Given that the pyre disturbed Grave 9, we can use the date 1500–1400 cal. BC (95.4%) for that burial as a *terminus post quem* for the pyre related to cremation Grave 10.

Mound II was created during the EBA period around 2140 BC–2016 Cal. BC (87.4%), as defined by the date of the primary burial Grave 4.¹² As with Mound I, cremation took place upon Mound II. This was defined by pyre debris on the eastern side of the mound, and this apparently took place on at least two occasions. This was determined by the presence of two layers of burnt soil and ash that were separated by a sterile layer of soil (**Fig. 2/2**). In the area around the pyre there were three burials in urns (1–3), which are preserved in partly disturbed contexts and not in formal grave cuts. The actions underlying the sequence as excavated can be resolved to some extent, and so we first present the stratigraphic situation and then present a discussion as to how this may have formed through past activities.

¹⁰ Никитовић 1999.

¹¹ *Ibid.* 6–7, 11.

¹² Dmitrović & Molloy 2022.

The pyre debris at the lower level had smaller dimensions than the upper one (1,7 x 1 m, oriented NW–SE), though the charcoal debris included bigger pieces. In the SE area of the pyre debris, a post hole was identified that probably belonged to the pyre construction. On the burned earthen surface, between the western edge of the pyre surface and the primary central stone structure which covered the EBA grave 4, fragments of a ceramic vessel and fragments of hair rings were documented. These belonged to Urn 3.¹³ Urns 1 and 2 were deposited intact into small, cut features set into the eastern edge of the EBA primary structure, near the western line of the pyre. Both urns were deposited into the mound which contained random stones and earth. These were placed in an upright position with the rims intentionally covered with stone slabs. The rim of Urn 2 was at the same level as the base of Urn 1. Next to the rim of Urn 2, the broken base of Urn 3 was recovered.

The upper, younger layer of pyre activity was larger and measured 4 x 1.6 m. This had been constructed following the same orientation as the lower, older pyre. The earthen layer separating the two episodes of pyre construction and use was 10–15 cm thick. The surface of the tumulus had been burned by the pyre activity in this area and charcoal and cremated bone were both recovered from this surface.¹⁴

We can interpret the stratigraphy here as: The lower pyre was associated with the cremation of the individual that would be placed into Urn 3. Shortly after the deposition, Urn 3 was scattered by some other, undefined, activity disturbing the mound. Its fragments and content were dispersed on a smaller surface, approximately 50 cm away from Urns 1 and 2. The findspot of the bottom of Urn 3 in the immediate vicinity of Urn 1's rim may indicate that additional cuts for deposition of these urns resulted in the damage to Urn 3. After the cremation in the lower pyre and deposition of Urn 3, this activity was sealed intentionally by a layer of soil to cover the place where the pyre had been. Whether elements of the pyre remained visible or people remembered its location, it was to become the focus of a second pyre at a later point. The interlude could have been anything from days to decades. The second pyre was then set on this location. It is very likely that activity in advance of or immediately after the

¹³ Никитовић 1999, 13, 14.

¹⁴ *Ibid.* 14.

use of the pyre disturbed and broke Urn 3, the base of which was re-used as a lid for Urn 3.¹⁵

The final act in this sequence was the deposition of Urn 1. This urn was likely placed into a feature excavated after Urn 2 had been deposited, but it is probable that the location was marked or known. Urn 1, as noted above, was deposited at a higher level with its base near the rim of Urn 2. However, the chronology of the ceramics does not strictly follow the apparent stratigraphic progression where Urn 3 was deposited first, followed by Urn 2, and then Urn 1. This is because the typologically similar S-profiled amphorae used as Urn 1 and 3 are considered to be older than the beaker used as Urn 2. Consequently, it is also possible that the digging of Grave 2 disturbed Grave 3, and that Urn 1 was recovered during this action and then deposited at the top of Grave 2, inverting the stratigraphic relationships.

The final grave in Mound II to be discussed was Grave 5. This was a deposit of cremated bone, buried without a container or one made of perishable materials. This was placed at the northern periphery of the tumulus, on an ashy surface measuring 0.4 x 0.6m. The human remains consisted of a small quantity of cremated bones and these were accompanied by bronze items – a cone-shaped tutulus cone, six small calotte-shaped items, and two hair rings.

Mound VII was a tumulus constructed using a large number of boulders and stones, making it somewhat different in structure to the other mounds described above. It was created in a mature phase of the LBA reuse of this cemetery. The central burial (Grave 1) was a cremation (**Fig. 3/2,3**), and a second cremation was placed close to it, early in the life of the monument (Grave 2). The cremated bones were interred without urns. No metal items were recovered from these graves, but greenish stains preserved on some cremated bones from Grave 1 suggest small items of metalwork had been present but were subsequently fully corroded and vanished.

Bulatović and colleagues have dated Grave 1 to 1370–1200 (68.2%) or 1390–1120 (95.4%) cal. BC.¹⁶ The proximity of Grave 2 to Grave 1, both sealed beneath a cairn of large stones and earth to form the core of the tumulus, suggests they are of similar date. The urn from Grave 3 was bur-

¹⁵ Никитовић 1999.

¹⁶ Bulatović, Gori & Vander Linden 2018, 123, 125, Table 1.

ied into the upper layer of the tumulus, such that this must be later than Graves 1 and 2. Grave 3 was buried at a shallow depth into the surface of the mound. It was disturbed by some subsequent activity, such that the urn fragments, cremated bones, and potentially other grave finds were scattered, and archaeological recovery of material from this burial may have been partial. There was a sufficient number of diagnostic sherds to define the shape of the vessel and a small amount of cremated bone was collected. The urn was a beaker with volutes, of identical type and similar manufacture to those from Grave 10, Mound 1, and Grave 2, Mound 2.

Ceramic and metal parallels

In the cemetery at Dubac, the two types of ceramic urns used can be related to vessels of the Belegiš group found throughout the south Pannonian plain and its environs. Parallels between ceramic forms common to western Serbian and those from the south Pannonian area have already been recognised, as discussed below. The vessels found at Dubac were local products, and their stylistic features suggest that their form and decoration were strongly influenced by traditions to the north, around the plain. They are evidently not imports and so those similarities that can be identified must have derived from interaction and knowledge exchange. The possibility that this transfer was an outcome of influence caused by direct inward migration rather than diffusion was rejected by Tasić.¹⁷ Ongoing ancient DNA analyses will shed further light on this.¹⁸ The material from Dubac is not isolated in presenting these influences from the north, and plenty of other parallels exist at other sites in the locale: Mojsinje,¹⁹ Krstac, Donja Kravarica, Arilje, Vranjani.²⁰

The metalwork recovered from the cremation burials is modest in comparison to that recovered from the inhumation burials. This may be a consequence of ideological or status differences, or it may relate to the mortuary rite, should metalwork have been placed on cremation pyres and destroyed by the intense fire. Those items that have been recovered, however, do not present clear evidence of distortion by fire and appear to

¹⁷ Tasić 2002, 172; see also Dmitrović & Ljuština 2024.

¹⁸ Iraeta-Orbegozo et al. in preparation.

¹⁹ Никитовић, Стојић, & Васић 2002.

²⁰ Dmitrović 2016, 152–156 with references.

have been placed separately into the burial deposit. They are represented by a torc, two spectacle-shaped pendants, several tutuli, calotte-shaped applications, and hair rings. All these shapes are typical for the inventories from graves of the LBA West Serbian group and similar finds come from many sites around the area. Generally, all bronze items from western Serbia have strong roots in Central European stylistic traditions. In cemeteries with Belegiš I and II vessels to the north of the river Sava, bronze objects were more rarely deposited in burials, though they were stylistically the same as those from western Serbia.²¹

The same forms of object were deposited in the inhumation graves at Dubac. As several of these burials have AMS ¹⁴C dates, we can use these similarities to provide indicative relative dates for cremated graves discussed herein. The metalwork from Grave 10 in Mound 1 is closely similar to the material from inhumation Grave 3 in the same mound, which is dated to 1446–1377 cal. BC (72.9%). Another close parallel is with inhumation Grave 5 from Mound 1, which was dated to 1416–1282 cal. BC (95.4%).²² It is reasonable on these grounds to date Grave 10, Mound 1 to the later 15th to 14th century BC. This in turn demonstrates contemporaneity between the burial rites in use throughout the LBA in the various mounds excavated at Dubac – namely, because bi-ritual rites span the entire LBA, cremation is not a chronological marker for the history of mortuary practice in this area during the course of the LBA.

Discussion and conclusions

The distinctive ceramic vessels from Dubac were products of local workshops that had been influenced by shape and decorative conventions common to the area north of the Sava and Danube rivers. The exact nature of contact and the means through which ideas moved have been much debated.²³ It has been argued that some form of economic and political dependence was in place, shaping the mobility of people and ideas in a way that gave rise to the adoption of ideas from the north in western Serbia.²⁴ The major changes in social organisation that characterised the

²¹ Vasić 2003; Vasić 2010; Dmitrović 2016, 160–195.

²² Dmitrović & Molloy 2025.

²³ Тасић 2002; Dmitrović 2016, 154–155, 257–258; Љуштина 2022, 131–147.

²⁴ Dmitrović & Ljuština 2024.

end of the MBA in the southern Pannonian plain, approximately falling between the late 17th to early 15th century BC coincide with the beginning of the reuse of the Dubac tumulus cemetery for burial in the LBA. We know little of the settlement archaeology of western Serbia at this time, and so we must reconstruct what we can from the mortuary record.

In the south Pannonian plain, the onset of the LBA between 1600 and 1500 BC was characterised by a period of particular social vibrancy. The marked increase in settlement numbers and their size defines a period of substantial growth as well as change. The ceramic styles associated with these settlements are primarily Belegiš I, and later Belegiš II, and Szeremle/Dubovac–Žuto Brdo.²⁵ West of the Tisza river, Tumulus culture ceramics are also found at settlements, but east of that river they are predominantly found in cemeteries in the north (Budžak Livade), and in the south (Karaburma). Kapuran²⁶ has argued for a riverine distribution bias, such that Tumulus culture pottery follows the course of the Danube and its tributaries generally in areas south of the river Mureş. A significant number of settlements identified in Banat have been ascribed to the Tisza Site group (TSG). A small number of sites with similar layout have been identified west of the Tisza in Bačka, though these have been less intensively explored; Belegiš pottery has been found at some. Those on both sides of the river are in turn part of a wider phenomenon of very large-sized LBA settlements termed the lower Pannonian network, that extends into southern Hungary and western Romania.²⁷ Highly similar pottery is found at those sites, sometimes termed Belegiš–Cruceni and Pre-Gáva.²⁸

The emergence of this network in the 16th century BC is linked with the use of Belegiš I pottery, along with Szeremle/Dubovac–Žuto Brdo, and a limited amount of Tumulus culture pottery. During the consolidation of the settlement network, approximately around 1400 BC, pottery with Belegiš II characteristics becomes commonplace throughout the south Pannonian plain. Cremation placed into urns, often with a second vessel as a lid, interred in flat cemeteries, had been dominant in the early phase of the LBA, though inhumation was also practiced. By the time

²⁵ Molloy et al. 2023a.

²⁶ Kapuran 2019.

²⁷ Molloy et al. 2020; Molloy et al. 2023a, 129, 132.

²⁸ Molloy et al. 2023a; Molloy et al. 2023b, 219; Sava 2020; Tasić 2003–2004.

Belegiš II was widely used, cremation was exclusively used in the context of flat cemeteries. It has been argued there was a move in the 15th century toward a certain degree of standardisation in pottery production of the Belegiš tradition in this area,²⁹ that likely corresponds to changes taking place in Hungary and Romania,³⁰ and it is plausible that groups in western Serbia were influenced by this wider wave of change to the north, while still pursuing local traditions,³¹ or even doubling down on them, for example the renewed use of tumuli. We may see in this a good case where the negotiation of identity was a dialogue between regional forces and local practices and beliefs. The period around the 1200 BC represents the point of abandonment of this network of settlements to the north and cemeteries to the south of the Sava and Danube rivers.

Cremation had been in use along the Danube close to the Iron Gates since the 20th century BC at least, and its uptake in Vojvodina began in the 17th to the 16th century BC, likely channelling influences both from these southern areas and areas to the north where Vátya and Transdanubian Encrusted Ware ceramic traditions were common.³² The visibility of mortuary activity south of the Sava and Danube rivers increases moving into the LBA.

The exclusive use of tumuli during the LBA in the hilly landscape of western Serbia marks the mortuary traditions of the region as distinct from culturally influential areas to the north and east, based on our current knowledge. While tumuli are known to the west as far away as the Adriatic coast, there are fewer material culture links to indicate frequent social interactions. In western Serbia, both inhumation and cremation were practised contemporaneously during the Early and Late Bronze Age phases at tumulus cemeteries.³³ When the first tumuli were founded (28th to 20th centuries BC), the Belotić–Bela Crkva ceramic group was current and exhibiting strong influences from the ceramic traditions of the south Pannonian plain.³⁴

²⁹ Molloy et al. 2023a, 137; Coxon 2018.

³⁰ Various in Bălărie et al. 2023; Dietrich 2015; Szentmiklósi 2006.

³¹ Dmitrović & Ljuština 2024.

³² Cardarelli et al. 2020; Kapuran, Gavranović & Jovanović 2022; Sørensen & Rebay-Salisbury 2023.

³³ Дмитровић 2015, 305–310.

³⁴ Dmitrović & Molloy 2022; Bulatović, Gori & Vander Linden 2020.

More specifically, in the earliest phase of the EBA between 2800/2700 and 2600/2500, ceramic assemblages show links with early Vinkovci–Somogyvár and the late phases of Vučedol traditions. These links are most readily recognised in ceramics from inhumation Grave 2 from the tumulus at Veliko Polje in Jančići, and from cremation Grave 13 from the Stupari necropolis near Užice.³⁵ Moving into the third quarter of third millennium BC, we find characteristic cist graves built using stone slabs, which Dmitrović³⁶ has termed the Dragačevo sub-group of Belotić–Bela Crkva. These cists were typically covered by tumuli, with examples from Turica, Dučalovići, Donja Kravarica, Markovica Negrišori, Krstac, Duškovci. In those contexts, Vinkovci–Somogyvár influences on the locally produced ceramic vessels can be observed.³⁷

The third phase of the EBA at the end of the third millennium BC sees the continued presence of bi-ritual mortuary rites, and these were usually interred in existing tumuli within established cemeteries at this stage. In Grave 1 from the tumulus at Prijevor near Čačak, there are indicators of new influences from the hinterlands of the Morava valley, visible in the burial ritual and ceramics related to the Bubanj–Hum III tradition. Inhumation burial continues alongside this, as observed in the case of the stone-built Grave 4 in Mound 2 at Dubac.³⁸

Moving into the beginning of the second millennium BC, no graves with material identifiable as MBA have been thus far identified in western Serbia and its environs. One relevant grave in the wider area with MBA Bubanj–Hum IV–Ljuljaci group type beakers comes from the tumulus at the Savin Lakat site in Jabuka near Prijepolje, south-western Serbia. This represents the south-westernmost example of this ceramic tradition which is typical for the Central Balkans in the first half of the second millennium BC.³⁹

In western Serbia, after approximately five centuries of hiatus, the earliest LBA burials known were inhumation and are dated to the turn of the 15th century BC. Cremation was introduced by the end of the 15th century at the very latest, up to a century after it had become common-

³⁵ Dmitrović 2016, 58–60; 144–146.

³⁶ *Ibid.* 254.

³⁷ *Ibid.*

³⁸ Dmitrović & Molloy 2022.

³⁹ Љуштина 2022, 117, 120, 138.

place in Belegiš I cemeteries immediately to the north. The cemetery at Dubac provides important insights into the temporality of both mortuary rites in this area based on absolute and relative chronologies of burials and artefacts, and this is supported by finds from other cemeteries in the region with absolute dates.

Based on the relative dating and stratigraphic relationships set out in this paper, it appears probable that cremation was introduced after inhumation at Dubac. This was confirmed by the relative positions of the burials and pyres in Mound I and in Mound II. These provide a 15th-century date as the most plausible *terminus post quem* for the introduction of cremation. It is likely that cremation burials began to be used in the 15th century BC and continued in use until the end of the LBA sequence at Dubac, considering Grave 1 from Mound VII can be dated to 1390–1120 cal. BC. Ceramic urns containing cremated bone were deposited in some cases, whereas in others it is plausible that the contents of urns were deposited into shallow pits but not the vessel, or that the bone material was deposited in an organic vessel or wrapping. These latter require ¹⁴C dates to confirm, or excellent stratigraphic relationships to define their chronology, given the lack of material for relative dating within the burial environment.

It is likely that the difference between cremation burials contained within and those not contained within ceramic vessels was related to mortuary choices that did not have a temporal dimension – that is, they appear contemporary and there is no evidence to suggest one practice is earlier or later than the other. This is based on the beaker used as an urn in a burial cut into Tumulus VII. That tumulus had been established after the beginning of the 14th century BC, when Graves 1 and 2 were interred with no associated ceramics or metalwork. Though lacking grave goods, considering that at least one served as a primary burial (and possibly both) over which a monumental tumulus was constructed, we cannot suggest that a lack of grave goods equated to low social status.

The stratigraphical features defined during excavation have enabled us to determine that in one instance at least, the amphorae were the usage of slightly older pottery than the use of a beaker for burial practices at Dubac. While one piece of evidence does not define a pattern, it raises the possibility of testing in future work whether this sequence has wider relevance for the chronology and social practices of this region.

Following this consideration of various complementary datasets from Dubac, encompassing stratigraphy, ceramic, and metalwork relative chronologies and AMS ^{14}C dates, we argue that the cremation burial rite was adopted in this cemetery after the reuse of tumuli had begun, when inhumation was exclusively practiced for a brief period. The timing of this is important, because if we see the reuse of tumuli as embracing older, local traditions in the face of a new cultural dynamic emerging in the Pannonian plain and impacting on societies here, that choice of monument was complemented initially by continuity in the treatment of the body. It is important in this regard that two cremation burials were interred during the foundation of a new tumulus (Tumulus VII). Cremation north of the Sava and Danube, based on current knowledge, was predominantly in flat cemeteries, therefore this choice not simply to insert cremations into a tumulus, but to create a new one to cover them, is important. This demonstrates a synergy of traditions and not the displacement of the old with the new. That is also evident in the frequent, continuous use of inhumation into the 13th century alongside cremation, in some cases within the same monument as cremations. This latter point is particularly salient if we consider that the presence of multiple tumuli within a cemetery may relate to distinct lineages or social groups associated with specific monuments. That in turn suggests that mortuary rites may not have been a means to define strict differences within the population using this cemetery.

Both inhumation and cremation appear to go out of use in the 12th century BC, and though it is plausible on the basis of the two latest dates for each rite that cremation lasted longer than inhumation, two dates is too few to build a reasonable case. The reasons for the adoption of cremation, or the population who performed it, may be hinted at by the adoption of ceramic styles from areas to the north where cremation was commonplace. However, we avoid drawing simple equations between how people chose to decorate their pots and commemorate their dead here. We look forward to the forthcoming biomolecular research on the inhumation burials from Dubac to open up new lines of evidence to continue to explore the background of, and relationships between, the population buried here.

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Mateusz Cwaliński*

Institute of Archaeology

University of Gdańsk

Gdańsk, Poland

The intricacies of long-distance contacts: why is there no amber in the Belegiš I culture?

Abstract: Recent years brought a revival of studies on the Bronze Age amber finds in the territory of Serbia. The current state of research allows one to characterise them in terms of chronology, cultural affiliation, and morphology. More complex are the issues related to modes and ways of amber influx from the Baltic zone to the Balkans, but with the help of provenience and typological analyses of the co-occurring artefacts, chiefly bronze items, these too are becoming clearer. A problematic question in reconstruction attempts of Bronze Age amber circulation is the role played in this process by the Belegiš I culture in Vojvodina. During the first horizon of amber influx into the Balkans (BrB–D; c. 1500–1200 BC) this area lacks attestation of amber's presence. Meanwhile, meridional relations between the Tumulus culture groups in the Carpathian basin and the communities inhabiting western Serbia seem dynamic and strong. The paper proposes three plausible reasons for the absence of amber in the area of the Belegiš I culture, related to (a) cultural, (b) depositional, and (c) economical factors.

Key words: amber, exchange, trade, Bronze Age, Balkans, Carpathian basin, Serbia

1. Introduction

The period around the middle of the second millennium BC marks the first occurrence of Baltic amber in archaeological context in the territory of Serbia. The exact chronology of this phenomenon can be established at phases BrB–BrC–BrD in the scheme of P. Reinecke (c. 1500–1200 BC), what in the Serbian archaeological literature is usually

* mateusz.cwalinski@ug.edu.pl

described as the Late Bronze Age as defined by D. and M. Garšanin,¹ or the second phase of the Middle Bronze Age and the earliest Late Bronze Age according to N. Tasić.² In the provinces of Srem and Banat this is also the time of the Belegiš culture development in its earlier form, identified with phases Ia, Ib, and Ic, following N. Tasić's division.³ Curiously, amber finds are known from the regions situated immediately to the north (near Szeged in southern Hungary), and to the south (in western Serbia, along the Drina and Western Morava rivers), but so far they have not been discovered inside the ecumene of the Belegiš I culture. This paper explores the interregional connections between Serbia and areas of Central Europe which brought amber there, and tries to answer why the northern part of the country has not delivered such finds.

2. Amber in Bronze Age Serbia as testimony of long-distance contacts

In the last few years there has been a surge in publications about Bronze Age amber finds from the territory of Serbia.⁴ This is a welcome development, since the last major works on amber in the country were A. Palavestra's seminal monograph *Praistorijski čilibar na centralnom i zapadnom Balkanu* [*Prehistoric Amber in Central and Western Balkans*] published in 1993,⁵ and then the exhibition catalogue *The Magic of Amber* released in 2006.⁶ Recent contributions to this subject offer a complete overview of the source material: its chronology, spatial distribution, cultural affiliation, and typology. Furthermore, authors put forward arguments why amber was imported to Serbia, and attempt to delineate routes of its influx into the region. As the database regarding amber in Bronze Age Serbia has already been fully presented in the cited papers, I will sum it up briefly, and then focus on the second aspect mentioned above, which is to say the interconnectivity thanks to which amber was translocated from Northern to Southern Europe.

¹ D. Garašanin 1967, 203–208; M. Гарашанин 1973, 378; M. Garašanin 1983, 737–738.

² Tasić 1995, 204; Tasić 2003, 30–31.

³ Tasić 2001; Тасић 2002.

⁴ Ljuština 2019a; Ljuština 2019b; Ljuština & Dmitrović 2020; Cwaliński 2020; Cwaliński 2023; Cwaliński et al. 2023.

⁵ Palavestra 1993.

⁶ Palavestra & Krstić 2006.

Overall around 178 amber artefacts – mostly beads, rarely pendants or buttons – are known from the first horizon of this material's appearance in the current territory of Serbia, dated to c. 1500–1200 BC. They were found exclusively in barrows on cemeteries located in the western part of the country: in the catchment areas of the river Drina (Banjevac–Jovanin Breg, Bela Crkva–Cerik, Belotić–Šumar, Paulje–Brezjak, and Savin Lakat) and the Western Morava (Ravnine and Vranjani). Previously the sites were identified with the so-called “Western Serbian variant of the Vatin culture” – a taxon distinguished by M. Garašanin, based on alleged similarities of the local pottery with the vessels of the Middle Bronze Vatin culture from Vojvodina.⁷ Nowadays, along with the revision of chronology, spatial range, and division of the Vatin culture,⁸ this idea has been largely abandoned. Instead, it seems that the ceramics recovered from the barrows in Podrinje and western Serbia have more in common with the Belegiš I culture in Srem, while the bronze metallurgy resembles that of the Tumulus culture, which in the northern part of Vojvodina (Bačka and Banat) sets the horizon following the collapse of the Vatin culture.⁹ Several propositions on how to denote this cultural phenomenon arose in the last decades; some researchers call it the “Brezjak culture” based on the eponymous cemetery in Paulje–Brezjak near Loznica,¹⁰ while others opt for the term “West-Serbian group of the Middle Bronze Age”.¹¹ It should be mentioned that, through grave inventories, western Serbian barrows reflect many links with similar funeral complexes on the western, Bosnian side of the Drina (Padine–Ročević and Glasinac), which have also yielded amber finds.¹²

The same grave inventories also contain evidence of contacts with areas further to the north: the Carpathian basin and Central Europe. At the time, these lands were dominated by the Tumulus culture and related units, which procured amber themselves. That it is predominantly the same fossil resin of Baltic origin (succinite) found in archaeological con-

⁷ M. Гарашанин 1973, 359; M. Garašanin 1983.

⁸ Ložnjak Dizdar 2007; Ljuština 2011; Ljuština & Dmitrović 2015.

⁹ Tasić 1974, 234–240; Тасић 1983, 60, 97; Filipović 2008, 99–100; Ljuština & Dmitrović 2016, 47.

¹⁰ Филиповић 2013, 76.

¹¹ Ljuština & Dmitrović 2016, 45.

¹² Benac & Čović 1956; Kosorić & Krstić 1970; Kosorić & Krstić 1972; Kosorić 1978; Cwaliński & Pravidur, 2023.

text in all those regions, including Serbia, has been credibly proven by provenience analyses.¹³ Therefore, one can expect that all these communities participated in a single network of amber circulation, extending southward from the Baltic coast. Unfortunately, chemistry of amber at this stage cannot discern between the various deposits of succinite, while Bronze Age amber artefacts exhibit very little morphological variation that could be otherwise used to trace ways of dissemination of products from particular workshops. Consequently, one has to mainly rely on the technology and the stylistics of the co-occurring finds, to reconstruct the aforementioned network. Here bronze objects from western Serbian barrows show a great cognitive value.

Typological analyses of the inventories from amber-rich sites in Serbia have shown how bronze finds discovered there, such as weapons and jewellery, are related to the similar artefacts from the Carpathian basin and Central Europe.¹⁴ Among the more interesting types, which require a detailed discussion, are the pins with disc-heads with a central thorn, famous for their length sometimes exceeding one meter (Fig. 1:A, E and F). The Serbian specimens were collectively analysed in terms of morphology, chronology, and spatial distribution by R. Vasić.¹⁵ Together with their counterparts from eastern Bosnia, similarly dated to BrC2–D, these pins form a conspicuous concentration within the scope of the entire Balkans (Fig. 2). Not counting the isolated cases of such bronze objects in Italy (Grotta Manaccora), and Albania (Çinamak),¹⁶ analogies have to be looked for to the north.

R. Vasić traced their origin to pins of the Dreveník type from Slovakia dating to the BrB2/C1 phase (Fig. 1:B), but he also noted their resemblance to pins with the so-called spindle-heads, occurring in some regional units of the Tumulus culture, chiefly in the area of Poland and Moravia (Fig. 1:K).¹⁷ Pins of the Dreveník type can be regarded as a “prototype” for the morphologically simplest of the pins with disc-heads and central thorns, such as the one from Banjevac–Jovanin Breg (Fig. 1:A),

¹³ Teodor et al. 2010; Jaeger 2016; Woltermann 2016, 236ff.; Chvojka et al. 2017, 116; Kaur et al. 2020; Cwaliński et al. 2023.

¹⁴ Filipović 2008; Филиповић 2013; Dmitrović 2016; Булатовић, Филиповић & Глигорић 2017; Cwaliński 2020; Cwaliński 2023.

¹⁵ Vasić 2003, 47–49.

¹⁶ Carancini 1975, pl. 55:1808; Kurti 2017, fig. 4:1.

¹⁷ Vasić 2003, 48; Říhový 1979, 39–42; Novotná 1980, 72–74; Gedl 1983, 59–65.

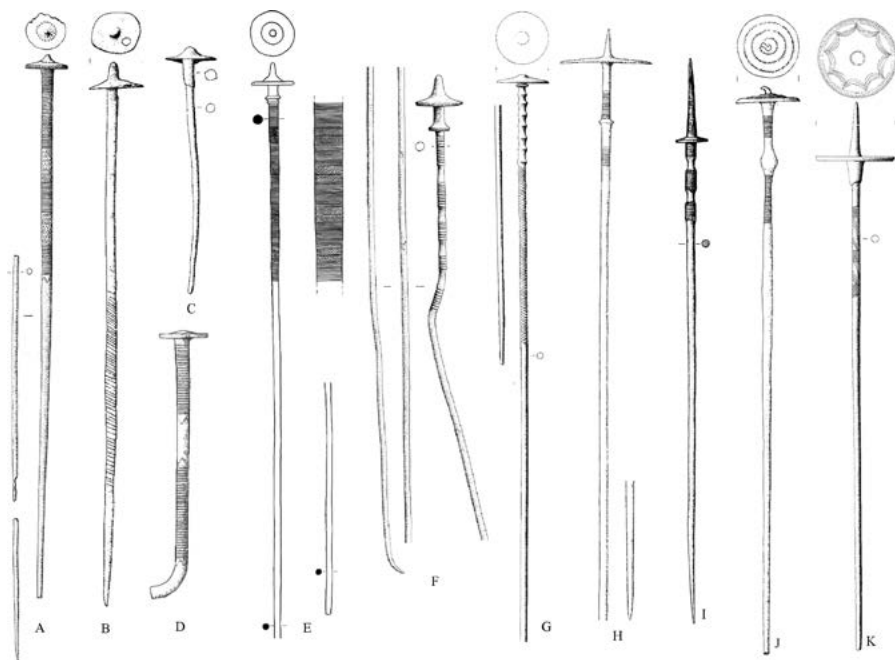


Fig. 1. Examples of hatpins in the four variants: simple one-piece (A–D), with profiled neck (E–H), with profiled disc (J) and two-piece with sleeve (K); A – Banjevac, barrow 2 (Булатовић, Филиповић & Глигорић 2017, pl. IX:2); B – Dreveník (Novotná 1980, pl. 17:413); C – Łubna, barrow 13 (Gedl 1983, pl. 19:242); D – Csabrendek (Říhový 1983, pl. 5:61); E – Paulje, barrow K (Булатовић, Филиповић & Глигорић 2017, pl. XVIII:29); F – Belotić, barrow XIX (Филиповић 2013, pl. II:7); G – Krzystkowice (Gedl 1983, pl. 19:243); H, J – Gemer (Novotná 1980, pl. 19:437, 439); I – Aunham (Innerhofer 2000, pl. 47:1); K – Wrocław-Księżę Wielkie (Gedl 1983, pl. 17:226).

but there are numerous other similar hat-head pins in the area between south-western Poland and Lower Austria (Fig. 1:B; 2).¹⁸ A more fitting analogy for the latter pin from Serbia would be the specimen from Csabrendek in Transdanubia which exhibits similar decoration on the shaft (Fig. 1:D).

¹⁸ E.g. Čujanová-Jílková 1970, pl. 54:20; Gedl 1975, pl. XVI:7–8; Říhový 1979, pl. 7:105–108; Neugebauer & Neugebauer-Maresch 1989, fig. 10:6.

Less frequent and precise are counterparts for the variant of the discussed pins with a profiled neck, such as in the cases from Paulje and Belotić (Fig. 1:E and F). Among the few that are known, the most similar are the pins from Krzystkowice in south-western Poland (Fig. 1:G), and Gerner in Slovakia, the latter appearing in two variants: with a flat (Fig. 1:H) and a profiled disc (Fig. 1:J). Analogies from southern Germany are more remote, both for the geographic distance and the morphological feature of the tall, decorated thorn (Fig. 1:I).¹⁹

Although all the above-mentioned pins differ in the shape of head and neck, which is reflected in their different names within regional typologies, chronologically they fall into the same period between BrB and BrD phases of the Bronze Age, and are associated with the Tumulus culture. It seems, therefore, that apart from a formal similarity, they may have a common genesis, or at least were created by various metallurgists under the influence of a similar inspiration. With this in mind, they can be combined into a working group of “hat pins” (due to visual similarity of their heads to hats of different sizes), with four variants distinguished on the basis of selected morphological features: (1) simple one-piece, (2) one-piece with profiled neck, (3) one-piece with profiled disc, and (4) two-piece with sleeve. What also draws attention is their distribution by large overlapping with the dispersion of amber in a similar time span (Fig. 2).

Apart from the sites located in the southern part of the Balkan peninsula (Montenegro, Kosovo*, Albania, and Greece), the geographically closest analogies for amber beads from the Bosnian–Serbian borderland come from Hungary, Romania, and Croatia (Fig. 2). In fact, in each of these regions, forms of resin-made ornaments, typologically corresponding to Central Balkan artefacts, are found, which is related to a rather low diversity of amber craftsmanship in the mid-second millennium BC.²⁰ In the period between about 1500 and 1300 BC (BrB–C), the latitudinal axis of contacts between the Serbian–Bosnian borderland and the Adriatic coast, despite the similarities among amber products, seems unlikely due to the lack of documented cultural connections visible in other materials; these appear only from the BrD phase along with the growing in-

¹⁹ Cf. Innerhofer 2000, 181–183.

²⁰ Cwaliński 2020; Cwaliński 2023; cf. Sprincz & Beck 1981; Boroffka 2001; Gogăltan 2016.

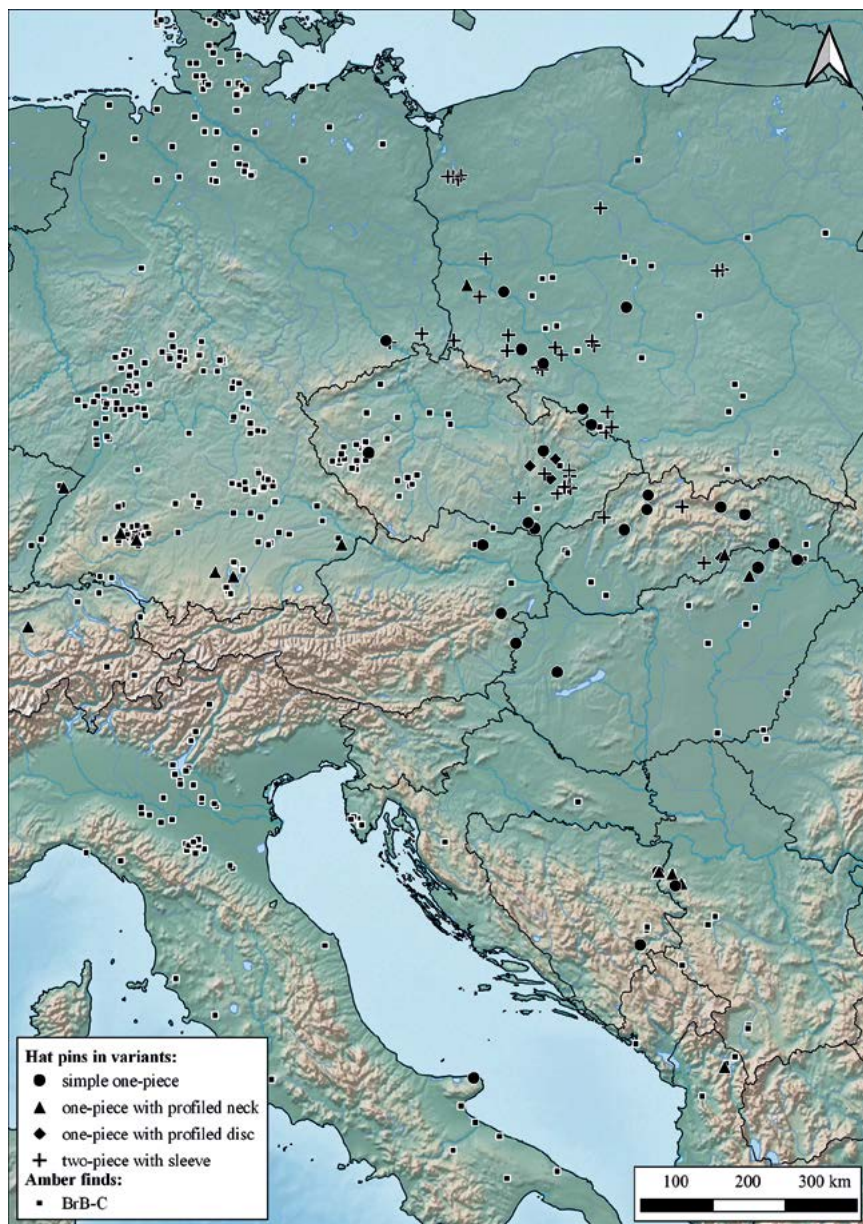


Fig. 2. Finds of four variants of hat pins in Central Europe against the background of amber distribution in BrB–C phases (based on Carancini 1975; Říhový 1979; 1983; Novotná 1980; Gedl 1975; Du Gardin 1986; Innerhofer 2000; Bukowski 2002; Vasić 2003; Stahl 2006; Gogăltan 2016; Woltermann 2016; Chvojka et al. 2017; Stuchlík 2017; Cwaliński 2023).

fluence of the Urnfield culture in the areas of the Western and Central Balkans.²¹ The routes of amber influx to the Central Balkans in the period of 1500–1300 BC (BrB–C) should rather be sought in meridional relations with communities from the Carpathian basin. On the basis of observations from the distribution of amber and hat pins in Europe, it can be concluded that, at that time, amber reached Serbia via the eastern branches of the Tumulus culture. What is, however, puzzling is the absence of both amber and hat pins in the territory of the Belegiš I culture in northern Serbia, despite the fact it was situated so-to-speak “on the way” between the area occupied by the Tumulus communities using amber, for instance the Tápé group in southern Hungary, and the burial mounds in the Drina basin.

3. Possible explanations for the absence of amber in the Belegiš I culture

It might be a difficult task to explain using archaeological evidential reasoning why something is missing from the record. The case of amber and the Belegiš I culture definitely is such a problematic issue. Judging by the distribution map (Fig. 2), one would expect to find a continuation of the “chain” of discovered amber deposits between southern Hungary and western Romania to the north, and the Drina basin to the south. Meanwhile, the entire map of Vojvodina does not show even a single dot signifying an amber findspot. It might be surprising given that the presence of the Tumulus culture – an archaeological unit known for its interest in amber – is attested in Bačka and Banat.²² Furthermore, communities of the Tumulus and Belegiš I cultures must have maintained some contacts, as there is no shortage of similarities in their respective materials, especially pottery. As has already been noted by N. Tasić, the latter reflects parallels in terms of morphology and decoration with the units along the Danube and Tisza (e.g. Carpathian Tumulus culture, Tápé, Rákóczipfalva, and Egyek groups) on the one hand, and barrow-building communities in western Serbia (Brezjak culture) on the other.²³ Taking into consider-

²¹ Cwaliński 2020; Cwaliński & Czebreszuk 2020.

²² D. Garašanin 1983.

²³ Tasić 2002, 171–172; cf. Przybyła 2005, 121–125; Ljuština 2017, 343–344; Kapuran, Gavranović & Jovanović 2022, 61–63.

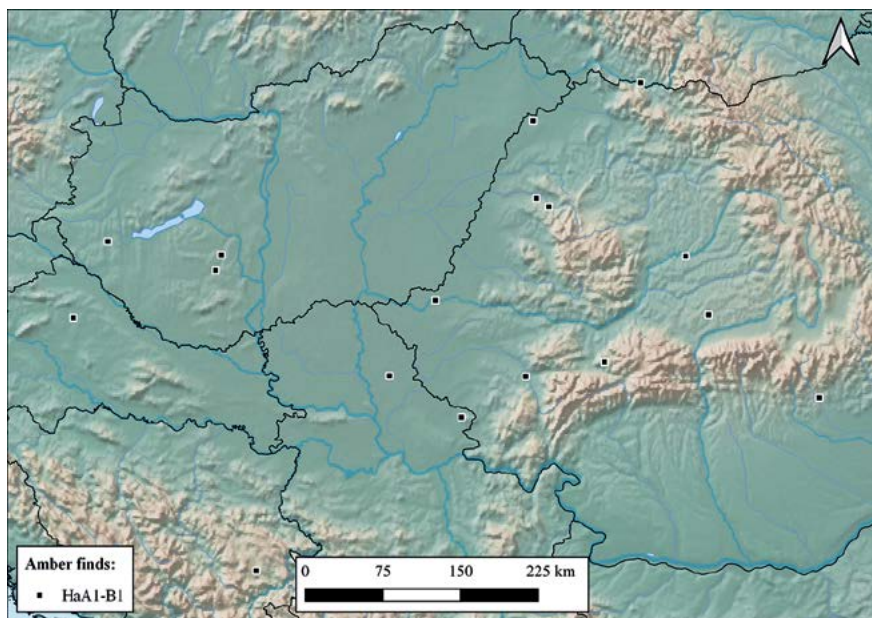


Fig. 3. Amber distribution in the Carpathian Basin in HaA1–B1 phases (based on Sprincz & Beck 1981; Gogâltan 2016; Cwaliński 2023).

ation these multiple and multilateral connections with its neighbours, how can we explain an absence of amber in the Belegiš I culture? Three plausible and mutually not exclusive solutions to this problem come to mind.

3.1. Rejection due to cultural norms

One possible explanation is that amber was rejected from the “package” of goods and influences arriving from the Tumulus culture by the communities of the Belegiš I culture as culturally incompatible (i.e. in terms of beliefs, norms of dress, social structure, etc.). It could be that the social context in which it was utilised by the Tumulus groups and, thus, the symbolism that was linked to this material, were not present or recognised at the time in Vojvodina. Some argument behind this hypothesis is provided by the differences in burial rites: absence of barrows and lavish inventories comprising bronze items produced in the typical “Tumulus fashion” in the Belegiš I culture. On the other hand, similarities

among their pottery cannot be denied, and prove that some cultural cross-pollination took place. In this case, perhaps the communities inhabiting Vojvodina at the time were selective in introducing to their culture innovations incoming from the north, and simply did not desire amber. This attitude, however, must have changed during the second stage of the Belegiš culture development (Belegiš II–Gava), as the first amber objects began to occur in this area (i.e. the hoard of Vršac–Majdan and the settlement of Banatski Dvor) (Fig. 3).²⁴ Looking at this problem from a different perspective, it could be said that communities of the Drina and Western Morava basins had access to amber because, unlike the Belegiš I culture, they were integrated into the Tumulus cultures complex with all its hallmark features (barrow burial rite, typical metallurgy, pottery, lack of permanent settlements, etc.). In this context it is worth being reminded of an older opinion, according to which barrow groups along the modern Serbian–Bosnian border are, in fact, the southernmost manifestation of the Tumulus culture.²⁵ Thus, the presence or absence of amber might be resulting basically from cultural affiliation and all the aspects that it stands for, beginning with such fundamental issues as religious beliefs or social structure, and ending with seemingly trivial factors such as fashion.

3.2. Destructive burial rite

The second viable explanation for the absence of amber in the context of the Belegiš I culture is related to the depositional factors' impact on the preservation of materials. The discussed cultural unit is known for practising a burial rite uniformly involving cremation of the dead, and placing their incinerated remains into ceramic urns. While communities of the Tumulus groups in the Carpathian basin, as well as those from the Drina basin, have also practised cremations (along with inhumation), there are several crucial differences between their respective burial rites. First of all, in the Belegiš ecumene the urns are found – without an exception – in simple grave pits, without additional structures such as stone enclosures or barrows.²⁶ Secondly, the grave goods inside the urns are deformed by extremely high temperatures, which suggests that they

²⁴ Rašajski 1988; Hristov 2017.

²⁵ Trogmayer & Szekeres 1966–1968, 29.

²⁶ Tasić 1974, 243.

were placed beside the body of the buried person prior to the ignition of the pyre.²⁷ In contrast, the cremated burials of the Tumulus-erecting groups in the Carpathian and Balkan areas do not show traces of consciously damaging grave inventories, hence one can suppose that they were added after the body had already been incinerated. As an inherently flammable substance, amber would not withstand the combustion process if left on the pyre. Therefore, if there was any amber used by the Belegiš I communities as a grave good, it could not survive the burial. On the other hand, one should be reminded also that the settlements from this phase of the Belegiš culture did not yield amber finds. On the contrary, there are amber objects, albeit scarce and only recently discovered, present in the settlement context of the Belegiš II phase which practised the same burial ritual as before. Summing up, while depositional factors might be affecting the state of research, one should be aware that there are currently no certain premises outside the funeral aspect on which to assume presence of amber in the Belegiš I culture.

3.3. Lack of economic leverage

There is a third way in which to solve the problem at hand. It is based on the latest observations on the long-distance transfer of raw metals used for producing bronze: copper and tin. Thus, the absence of amber in the Belegiš I culture, aside from cultural and depositional reasons, could be economically conditioned.

Recent studies present a picture of a dynamic network of copper supply to the Central Balkans during the second millennium BC. The bronze industry in the area was initially (BrA–Br₁; c. 1900–1500 BC) dominated by copper from the relatively close sources in eastern Serbia, around the city of Bor, whereas towards the end of the millennium (HaA2–Br₁; c. 1150–950 BC) it was the southern Alpine ore, most probably from the Trentino area, that became predominant.²⁸ Inbetween, however, there occurred a period of oligopoly (BrB2/BrC–HaA₁; 1500–1150 BC), during which copper from other sources began to appear in the Central Balkans. While the first objects made from the southern Alpine copper are dated as early as BrB2/BrC, and the Bor mines could have been still exploited at that time, some of the BrD and HaA₁ finds reveal

²⁷ Cavazzuti et al. 2022, 68.

²⁸ Mehofer et al. 2021; Gavranović et al. 2022.

the presence of a different copper, probably from the Slovak Ore mountains.²⁹ Although it has to be underlined that bronze artefacts from the amber-yielding sites in western Serbia have not been analysed so far, the horizon of amber presence there curiously coincides with the above-mentioned arrival of copper from remote sources.

Moreover, in exchange for the copper, barrow communities of the Drina basin had excellent tin to offer, acquired from the placer deposits near the Cer mountain situated a mere 15 km in a straight line from the cemetery of Paulje.³⁰ Provenance studies of tin in bronze objects collected from the Balkans and the Carpathian basin show that the isotopically “heavier” western Serbian tin was the principal bronze ingredient in the area south of the Drava–Danube line, while the “lighter” tin identified with the Czech Ore mountains prevailed to the north of it.³¹ It appears that western Serbian tin was mainly exported to the south, however it should be emphasised that the number of metal artefacts from the Carpathian basin used in the analysis is small, which also does not exclude occasional arrivals of tin of Balkan origin to the north.

Not all of the issues connected with the circulation of metals during the Bronze Age are clear for the moment, and many more samples need to be taken before the picture is more convincing. Nevertheless, the link between amber, copper, and tin becomes too obvious to be neglected. To repeat some of the information from chapter 2, the longitudinal links between the northern Adriatic–southern Alpine zone and the Drina basin emerge only during the BrD, which goes well with the observation of the gradually increasing import of copper from that part of Europe. Earlier, that is during the BrB and BrC phases, the meridional axis of contacts linking western Serbia with the Tumulus culture communities in the Carpathian basin played a more important role. Perhaps already at that stage, copper from Slovakia – and with it Baltic amber – started to appear in the Central Balkans, as indicated by the similarities among bronze artefacts, for example hat-head pins (Fig. 2). However, one should not forget the westward extension in distribution of those pins, reaching the amber-opulent Tumulus groups in southern Germany, thus indicating another viable route of amber inflow into the Carpathian basin and the Balkans.

²⁹ Mehofer et al. 2021, fig. 14; Gavranović et al. 2022, fig. 5.

³⁰ Huska et al. 2014.

³¹ Mason et al. 2020.

Although of a rather regional significance, tin deposits in western Serbia might have been an important factor, elevating local communities to the position of active participants in the raw materials exchange. At the same time, Belegiš culture communities lacking direct access to metal sources did not enjoy economical leverage such as their neighbours. One could respond that the Tumulus culture communities living in the Lower Tisza and Mureş basins did not control any metal sources either, but somehow they managed to acquire amber. The easiest answer to this would be to get back to the argument presented in chapter 3.1. – the cultural bond between the Tumulus and western Serbian groups was strong and sustainable, thus in their contacts they bypassed other, more foreign communities.³² However, it is not only a matter of qualitative, but also quantitative differences. In considering economic power exerted by various participants in this network of goods exchange, one should look at the total amount of amber per region. It occurs that the nearest areas comparable to the Bosnian–Serbian borderland during the BrB–D, in terms of numbers of amber findspots (12) and artefacts (236), are the Po plain and Trentino (f: 228; a: 363), Bohemia (f: 38; a: 215), and Slovakia, with adjacent parts of Hungary, Moravia, and Poland (f: 18; a: 143).³³ In all these cases the sites are concentrated relatively close to the earlier described sources of metal ores, hence the conclusion that the ease of access to deposits of raw materials was giving those communities a considerable advantage in trade relations.³⁴ In comparison, the more scattered and remote sites could be interpreted as sporadic customers of amber, occasionally mediating its transfer. Summing up, from the exchange networks perspective it seems that while the Belegiš I culture definitely managed to secure access to some bronze products, it might not have had enough economic leverage to participate in amber circulation.

³² This particular case could be explained with two modes of exchange called by C. Renfrew “home reciprocity” and “emissary trade”, both bypassing any middleman such as in the “down-the-line” model (cf. Renfrew 1975, fig. 10).

³³ Cf. Sprincz & Beck 1981; Horváth 1999; Bukowski 2002; Gogâltan 2016; Chvojka et al. 2017; Stuchlík 2017; Cwaliński 2023. The numbers given are approximate and should be regarded as minimum values.

³⁴ The apparent dislocation of amber deposits in relation to the metal sources mentioned above can be explained with the concept of “unequal exchange” (cf. Shennan 2010; Bellintani 2014).

4. Summary

The short overview presented above surely does not exhaust the list of possible reasons for the absence of amber in the Belegiš I culture. It is up to the reader to decide which of the proposed explanations is the most credible, while waiting for future research to deliver more evidence clarifying the matter. Meanwhile, there is space in the discussion for all of the described factors: cultural, depositional, and economical. Furthermore, the reason for the absence of amber in the mid-second millennium BC could be a combination of them. One can imagine that the relative economical weakness and low integration into the Tumulus complex of the Belegiš I culture resulted only in a tiny stream of amber influx, and what it managed to get hold of was subsequently destroyed in burial rituals.

Whatever the conditions for this situation were, they must have changed at the end of the Bronze Age, when the Belegiš culture went into the second stage of its development. During the HaA1–B1 (1200–950 BC) the first amber found its way into archaeological deposits in Banat. However, its occurrence was the result of a differently configured network of contacts in the Carpathian basin and the Central Balkans. The shift in amber findings away from the Slovak Ore mountains, the Tisza, and the Danube is noticeable in that period (Fig. 3). Instead, amber is appearing in the regions lacking its attestations in the preceding stage: Transdanubia on the one hand, and Romania on the other. At the moment it is difficult to say what caused this shift, however cultural, economical, and political factors again could have played their part.

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Ivan Ninčić*

Institute of Archaeology
Belgrade, Serbia

Nikola Tasić and the question of the Bosut group

Abstract: Until the mid-twentieth century, knowledge of the archaeological picture of the Serbian Danube region in the Early Iron Age was modest, therefore this area was usually incorporated into the zone of the Late Urnfield culture or the Basarabi complex. Significant new data gathered through field research in the 1960s allowed for drawing improved conclusions, motivating Nikola Tasić to differentiate a new group. The distinguished Serbian archaeologist noted particularities in the material culture of the local population, which separated them from the rest of the Basarabi complex, thus defining the Bosut group. In the following decades, Tasić's initial blueprint of the group was repeatedly revised and supplemented by cumulated data. The aim of this paper is to present the progress of research on the topic of the Group, and how firm the initial definition holds more than half a century since the original publication.

Keywords: Nikola Tasić, Early Iron Age, Bosut group, Danube region, Basarabi

Introduction

The state of research of the Early Iron Age in the Serbian Danube region and its surrounding areas in the first half of the twentieth century was still at a modest level, which made drawing precise conclusions on the archaeological cultures of the time a rather dubious and thankless task. Authors tended to include this area into the Urnfield culture sphere, or sometime later into the Basarabi phenomenon zone. Extensive field investigations in Syrmia, as well as the rest of Vojvodina, during the 1960s spawned new results that contributed to creating a clearer picture of the Early Iron Age in the area. Several distinguished archaeologists of the time took part in piecing the puzzle together, with Nikola Tasić mak-

* ivannincic.arh@gmail.com

ing the decisive step forward in singling out the Bosut group as a specific entity of the Early Iron Age in the Danube region, with distinctive material culture traits and settlement patterns.

Tasić, considering the newly acquired knowledge, laid a blueprint of the cultural image in the area, as the Bosut group became synonymous with the EIA in the western parts of the Serbian Danube area. The process of separating the group from its cultural surroundings, though, was not simple and undisputed, demanding a lot of forward thinking. More than half a century later, we look back at the challenges on the path to differentiating, dating, and defining the core elements of the material and symbolic culture of the Bosut group.

Gathering new data

The Bosut group name stems from the site of Gradina na Bosutu, between the villages of Vašica and Batrovci in Syrmia, first discovered in the late nineteenth century,¹ though it took eight decades until the first archaeological excavations in the mid-1960s.² Almost simultaneously, same period sites were discovered in Gomolava near Hrtkovci,³ Popov Salaš near Kać,⁴ Židovar near Vršac,⁵ Feudvar near Mošorin,⁶ and others.⁷ The whole region was at the time thought to belong to the zone of the late Urnfield culture Dalj group,⁸ coming from the West, or to the extensive reach of the Basarabi complex from the East – mostly due to a poor state of research.⁹

Significant increase in regional knowledge of the period motivated Nikola Tasić to revise contemporary perception of the Early Iron Age in the area. Exploration allowed for a certain stratigraphic position above the Late Bronze Age Belegiš II horizon (in Gomolava), and below the La Tène horizon (in Gomolava and Gradina na Bosutu). Ceramic material

¹ Поповић & Радојчић 1996, 7.

² Milošević 1964, 18–19; Tasić 1965a, 47–50.

³ Гирић 1965, 109–111; Тасић 1965b, 202–204; Petrović 1986, 37–41.

⁴ Medović 1962; Medović 1963.

⁵ Gavela 1964; Gavela 1965; Gavela 1966.

⁶ Falkenstein, Hänsel & Medović 2016, 5.

⁷ Popović 1966; Popović 1967; Popović 1968; Popović 1969; Popović 1970.

⁸ Грдић 1939, 58–59; Тасић 1962; Vinski-Gasparini 1973.

⁹ Vulpe 1965; Vulpe 1986.

collected from the sites displayed clear distinction from the Dalj group pottery, though metal artifacts shared common traits. Frequent finds of biconical bowls (or bowls with an inturned rim) with a faceted rim, bulbous vessels with high necks, and cups with one or two handles, all of them often decorated with stamped and incised white encrusted motifs, notably the S-pattern, indicated an association with the Basarabi complex spreading from the East. Nevertheless, Tasić cited undeniable local particularities as the primary argument that finally led him to distinguish a new group in 1971.¹⁰

Defining the group

More than half a century of investigating the Bosut group contributed to defining the main traits of its material and symbolic culture. The group is foremostly determined by its pottery shapes and decorative techniques. Even though it is associated with the Basarabi trend in pottery production, the Bosut group started its development in an earlier horizon, but also continued to exist after the Basarabi pottery fell out of fashion. Pottery of the earliest stage, called the Kalakača stage, is of a somewhat coarser make, with familiar shapes that include tall pots, bowls with twisted rims, oblique cups, and so on. Vessels are modestly decorated compared to the preceding Belegiš II and succeeding Basarabi stage (Fig. 1).¹¹ Furthermore, pottery craftsmen continued producing identical vessel shapes during the Basarabi horizon, now richly decorated with more elaborate decorative techniques and motifs, including the distinctive S-motif, spirals, hatched triangles, the “maltese cross”, and even some rare schematic anthropomorphic and zoomorphic figures. Adorning was done by incisions and stamping, and encrusted with white paste (Fig. 2).¹² The third and last phase started when Basarabi style pottery became outmoded. Vessel forms still persisted, though decoration was reduced to fluting, leaving the vessels looking somewhat uniform and monotonous (Fig. 3).¹³

¹⁰ Tasić 1971a; Tasić 1971b.

¹¹ Medović 1990, 27–28.

¹² Tasić 1971a, 62–68; Tasić 1971b, 35–38; Medović 1978, 47–48.

¹³ Medović 1978, 52–55; Medović 1990, 29–30.

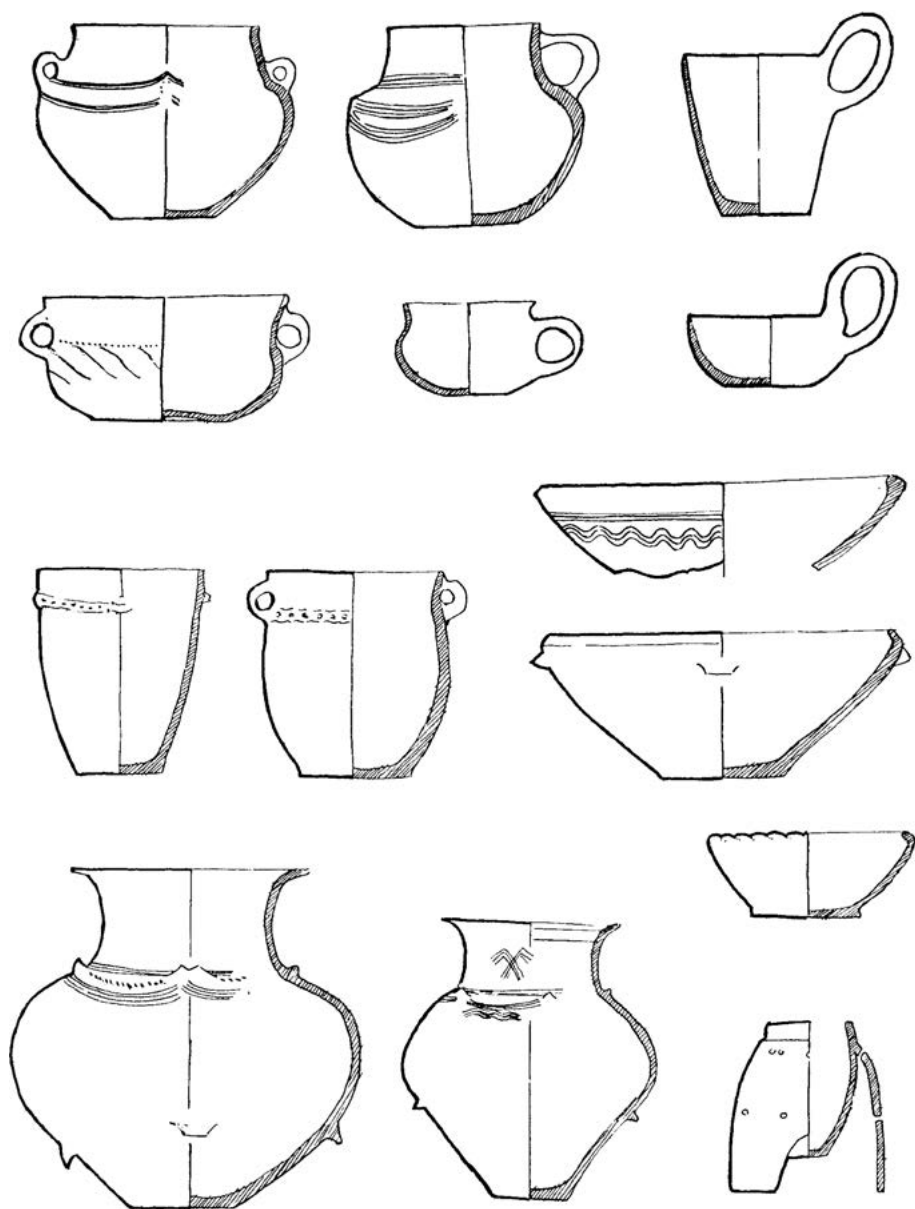


Fig. 1. Pottery of the Bosut I–Kalača phase (after Vasić 1987, 539, fig. 30).

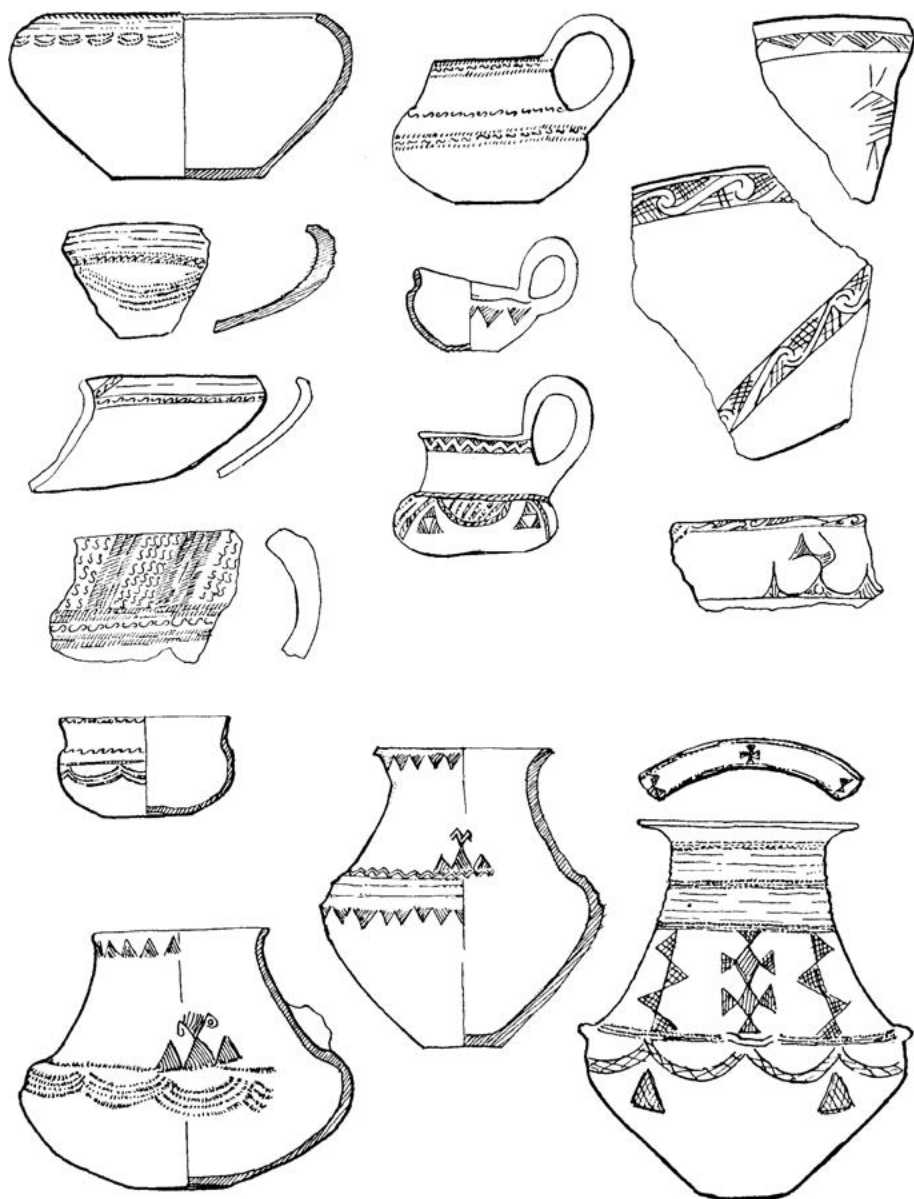


Fig. 2. Pottery of the Bosut II–Basarabi phase (after Vasić 1987, 543, fig. 31).

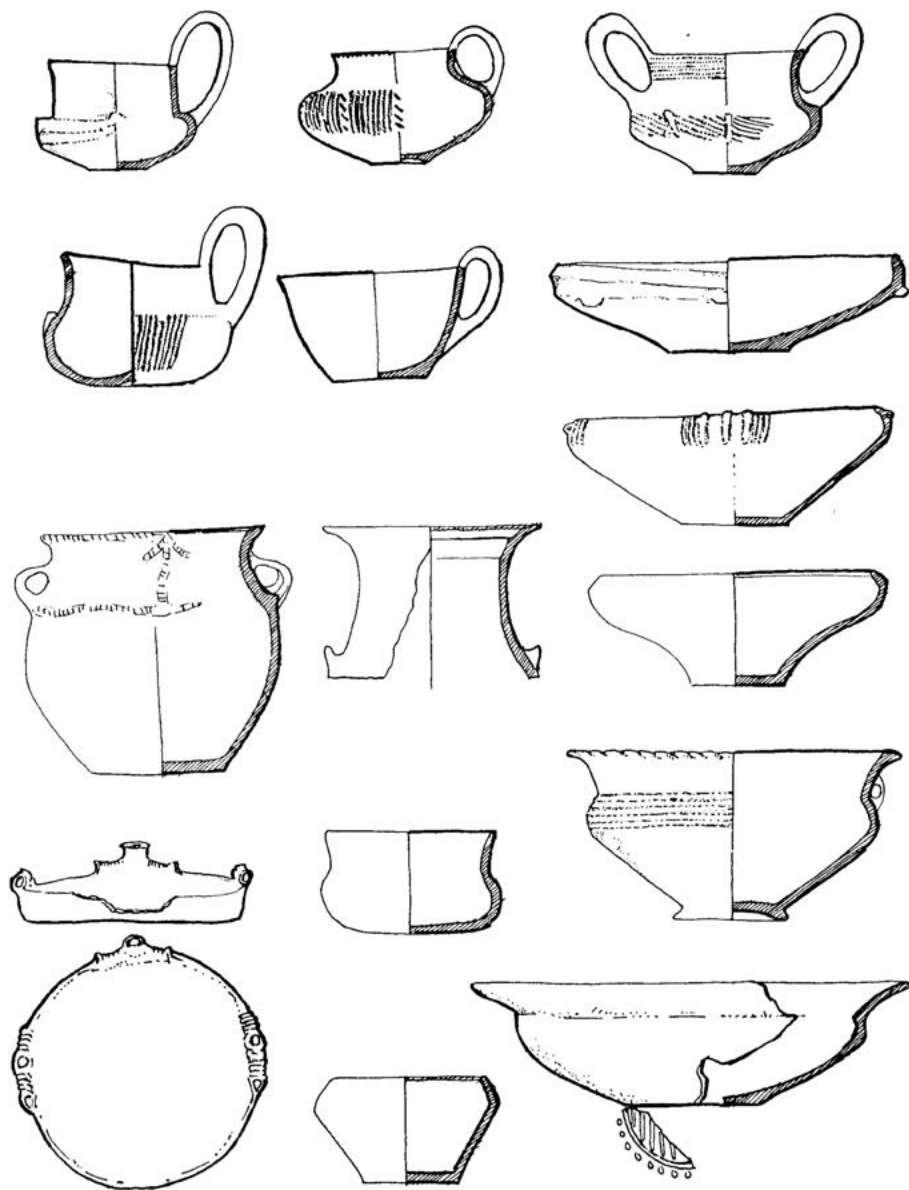


Fig. 3. Pottery of the Bosut III–Fluted pottery phase (after Vasić 1987, 547, fig. 32).

Settlement patterns of the group remain mostly unchanged throughout its existence, being mostly gradina-type (hillfort) villages, with some valley settlements.¹⁴ Burial customs, on the other hand, are not that clear cut. The archaeological record has shown evidence of both inhumation¹⁵ and cremation of the deceased,¹⁶ with skeletal graves of the Syrmia group presumably associated with the youngest phase of the Bosut group.¹⁷ In any case, the presence of inhumation burial rites presented a novelty compared to burning of the deceased in the Late Bronze Age.

The chronological table was set through expansive stratigraphy of the settlement of Gradina na Bosutu, that spanned from the late Neolithic, through the Bronze and Early Iron Ages, to the La Tène period. The Early Iron Age horizon was marked as Bosut III, later Bosut IV, after an Eneolithic stratum was documented on the site. Three stages of the Early Iron Age settlement were marked via their position in the site strata: IVa – Kalakača phase; IVb – Basarabi pottery phase; and IVc – fluted pottery phase.¹⁸ Nikola Tasić, though, preferred the simple designations of Bosut I–III for the Early Iron Age chronological table, in order to avoid confusion.¹⁹ The key point in setting the chronological table was, however, the discovery of the Kalakača site near Beška in 1971, which confirmed the continuous development of the Bosut group since the formidable pre-Basarabi horizon, into the second and third stage.²⁰

Speaking on the time of its inception, Nikola Tasić argued in the early 1980s that the Bosut group began to emerge after the *hoard horizon II*, phase Ha A2 according to the Central European chronology by Müller-Karpe, or after the Belegiš II phase in the Danube region, that is, after the Gava period in the Banat region. Earliest dates of the group were dated thanks to the Belegiš II phase pottery found in the strata preceding Bosut group layers on the sites of Gomolava and Kalakača. The first stage of the group, the Kalakača stage, Tasić dated to the Ha B3

¹⁴ Medović 1990, 24.

¹⁵ Vasić 1987a, 548–551; Tasić 2005, 9; Петровић 2010; Стојић 2013, 43–69; Анђелић 2017.

¹⁶ Анђелић 2016; Koledin 2020.

¹⁷ Medović & Hänsel 2006.

¹⁸ Medović 1978, 13–14; Medović & Medović 2010, 17–18.

¹⁹ Tasić 1983, 123.

²⁰ Medović 1971, 27–29; Medović 1972, 34–35; Medović 1973, 33–35; Medović 1974, 52–54.

phase, contemporaneous with the Šarengrad hoard,²¹ and the emergence of the so-called “Thracian-Cimmerian” finds. Similarities in metal finds of the Šarengrad hoard and the Group grave II from Gomolava, as well as common pottery traits between the Grave and the Kalakača stage, motivated Tasić to formulate a synchronous horizon: Group grave II–Kalakača–Bosut I (Bosut IIIa/IVa). A considerable chronological discrepancy between the Ha A2 and B3 phases he explained with inadequate use of Müller-Karpe’s Central European periodisation in the case of the Yugoslav Danube region, as well as the long use of items found in the hoard. Tasić sought confirmation for such a dating in a harp-shaped fibula (*Harfenfibeln/Sattelfibeln*) found in Kalakača, which he dated to the Ha B3 phase (Fig. 4/1), therefore setting the early Bosut phase between the mid-tenth and early seventh century; the middle one to the seventh and sixth century; and the third one from the sixth to the fourth century BCE.²² Two decades later, Tasić somewhat corrected his dating frame by placing the Kalakača phase to the ninth and partly the eighth century; the Basarabi phase from the seventh to the fifth; and the latest phase from the fifth to the early fourth century BCE.²³

The question of the western border emerged naturally after the differentiation of the new group. In his early research, Tasić drew the demarcation line between Vinkovci and Osijek, and southern Bačka and Zrenjanin northward,²⁴ later correcting it more eastward on the Vukovar–Županja and Šid–Ilok lines.²⁵ The eastern border was, on the other hand, much more unclear, with find spots across the Velika Morava and in the Iron Gates regions. However, Tasić concluded that during the time of the development of the Kalakača phase, the Gava group was flourishing in south-western Romania and the Iron Gates region.²⁶

Considering material culture similarities with the Basarabi phenomenon coming from the East, Nikola Tasić believed in the genetic association of the two entities, but also viewed the Bosut group as a violent migratory group that ended the period of hoarding horizons, and the de-

²¹ Vinski & Vinski-Gasparini 1962, 270.

²² Тасић 1983, 121–123.

²³ Тасић 2005, 11.

²⁴ Тасић 1974, 269.

²⁵ Тасић 1979.

²⁶ Тасић 1983, 122; Тасић 2005, 12.

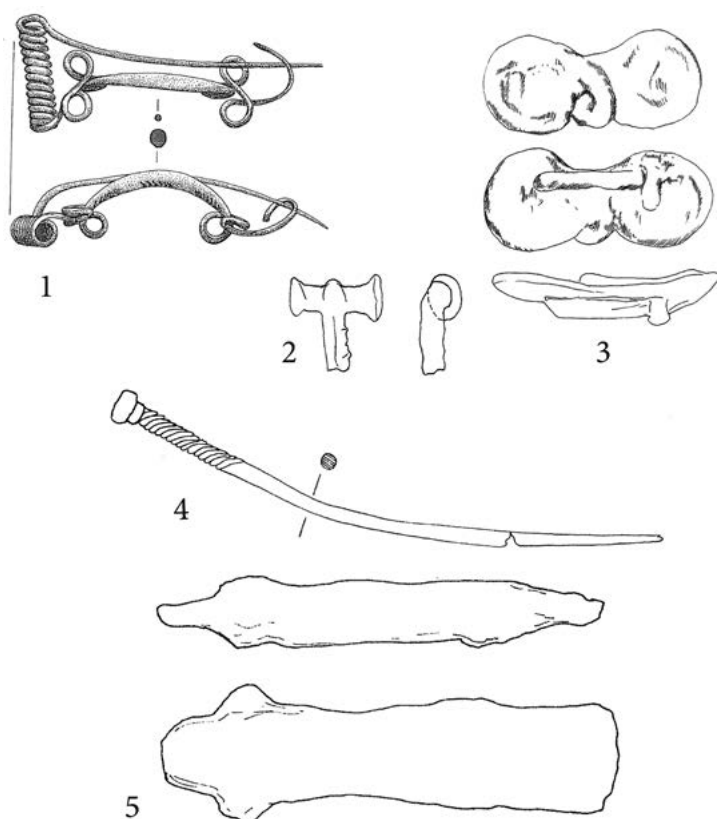


Fig. 4.

1. Harp-shaped fibula (after Medović 1978, pl. XLV/1)
2. T-shaped torque end (after Medović & Medović 2010, fig. 57/3)
3. Bronze needle (after Medović & Medović 2010, fig. 14/2)
4. Spectacle fibula (after Medović & Medović 2010, fig. 86/1)
5. Axe (after Medović & Medović 2010, fig. 57/1)

velopment of late Belegiš phases on the roots of Bronze Age traditions. Further evolution of the group resulted in forming of local particularities and shifting from the original Basarabi. Since the timespan of the Bosut–Basarabi phase coincided with the so-called “Thraco-Cimmerian” horizon, Tasić proposed that they should be studied within the framework of the same “cultural and ethnic movements”.²⁷

²⁷ Tasić 1971a, 69–70.

Revisions and legacy

Revisions and commentary of the newly defined group came in the years following the initial publication. Another researcher who gave immense contribution to the study of the EIA in the Danube region, Predrag Medović, gave his own assessment on the problem, stressing the conditional use of the term “Bosut group”, but also regarding Tasić’s differentiation of a separate cultural entity within the Basarabi complex as premature. Furthermore, Medović rejected the idea of the Bosut group as part of the larger Basarabi phenomenon, since it only dominates the middle phase, as accounted for in the extensive stratigraphy of the Gradina na Bosutu site. The Group should, therefore, be recognised including its older and younger phases, that is the phases that precede and succeed the Basarabi one,²⁸ which is something Tasić adopted in his later work.²⁹

The western border of the Group was commented on by Daria Ložnjak Dizdar, who highlighted its influence on the fringes of the Dalj group. The author agreed on the borderline stretching from Vukovar to Ilok, though she insisted on a fluid demarcation zone between the two groups.³⁰ The eastern border is still rather difficult to define. The Danube region in the Iron Gates area draws tradition from the Insula Banului and Gornea horizons,³¹ and should, therefore, not be considered a part of the Bosut group zone.

Most of the revisions by other authors were related to the chronology. Medović dated the first phase of the Bosut group from the start of the ninth century to the mid-eighth century BCE,³² later correcting its beginning half a century earlier, to the mid-tenth century,³³ outlining its duration in a slightly earlier and shorter timespan than Tasić originally formulated. He criticised the equalisation of the Gomolava Group grave II with the Kalakača stage, arguing that the metal objects from the grave, as well as the pottery decorated with a “pine branch” motif and white encrustation, belong to the later period.³⁴ This viewpoint was shared by

²⁸ Medović 1978, 13–14.

²⁹ Тасић 1983, 121–123; Tasić 2005.

³⁰ Ložnjak Dizdar 2004, 19–26.

³¹ Вукмановић 1990; Карпур 2014, 73–84.

³² Medović 1978, 43–45.

³³ Медовић 1987; Медовић 1990, 23.

³⁴ Medović 1978, 43.

Christopher Pare as well, who added that the metal finds belong to Hoard horizon VI of the Carpathian basin, dated to the eighth century BCE.³⁵ Medović also dated the Kalakača harp-shaped fibula to the Ha B3 phase at the latest,³⁶ leaving a possibility for an earlier date.

Besides the fibula from Kalakača, metal finds discovered on Gradi-na na Bosutu in the decades following Tasić's definition of the Bosut group helped to determine a *terminus ante quem* of its inception. The site on the Bosut river, unfortunately, included only late stages of the Kalakača phase in its first two settlement horizons, characterised by uncommon finds of pottery decorated with inordinately stamped S-motifs. Metal finds belong mostly to the Ha B3–C1 phases, therefore, Medović concludes that the Kalakača settlement could not have been older than the mid-ninth century.³⁷ A fragment of a torque with T-shaped ends belongs to a common form for the Ha B3–C1 phases in Serbia and North Macedonia (Fig. 4/2), with known specimens in Croatia, Hungary, Romania, and Czechia.³⁸ A single bronze needle discovered is dated to the eighth and seventh century BCE (Fig. 4/3),³⁹ while a smaller sized spectacle fibula with a figure-of-eight coupling from the third settlement horizon (Fig. 4/4) has analogies in the Šarengrad hoard in Croatia, and is commonly found in context with the so-called "Thraco-Cimmerian" objects, belonging to the hoard horizon VI, or the Ha B3/C1 phases.⁴⁰ Within the same horizon, they are discovered in the Group grave II in Gomolava,⁴¹ as well as in the hoards from Rudovci,⁴² Žirovnica,⁴³ Janjevo,⁴⁴ Rožanci,⁴⁵ Mačedonce,⁴⁶ and Rujište, where it was discovered along with nine iron axes with small side arms.⁴⁷ An axe of this type, also known as *Ärmchenbeil* in German literature, was discovered in the second settle-

³⁵ Pare 1998, 373.

³⁶ Medović 1978, 43.

³⁷ Medović & Medović 2010, 270–271.

³⁸ Васић 1988, 3–5; Vasić & Kapuran 2007, 38.

³⁹ Vasić 2003, 97.

⁴⁰ Pare 1998, 370; Metzner-Nebelsick 2002, 416.

⁴¹ Tasić 1972.

⁴² Гарашанин 1954, 37.

⁴³ *Ibid.* 34.

⁴⁴ *Ibid.* 35.

⁴⁵ Тодоровић 1971, 25–27.

⁴⁶ Ерцеговић-Павловић & Костић 1988, 18.

⁴⁷ Лаловић 1975, 143.

ment horizon of the Gradina (Fig. 4/5),⁴⁸ and it is especially important for the dating of the site. Iron axes with small side arms are associated with early stages of iron use, and are usually dated to the Kalakača phase, or the ninth or eighth century BCE, in other words, to the hoard horizon VI, or the Ha B3/C1 phases. The simple fact that no iron objects from the Western or Central Balkans could be reliably dated before the ninth century,⁴⁹ represents a firm *terminus ante quem* for the late stage Kalakača phase settlement of the Gradina na Bosutu site.

A notable Serbian researcher of the EIA, Rastko Vasić, supported Tasić's idea that the Bosut group's inception was in continuation with the Belegiš II horizon, that is after the Ha A2 phase, or at the turn of the millennium;⁵⁰ this is mostly confirmed by later investigations at the sites of Feudvar, Kalakača, Batka C near Perlez, and Ivanovo.⁵¹ Vasić classified a harp-shaped fibula from Kalakača as a saddle-shaped fibula (*Sattelfibeln*), dating from the Ha B2 phase (ninth century BCE), with a possible origin in present-day Slovenia.⁵² He considered an assemblage of finds from the Gomolava Group grave II as a late Bosut I–Kalakača occurrence, manifested with more elaborate incised motifs and white encrusting, as opposed to Tasić's earlier dating, with the whole phase ending no later than the first half of the eighth century. Objects of the so-called “Thraco-Cimmerian” qualities belonged to the late Bosut I phase, and mostly in the succeeding phase, Bosut II–Basarabi (Ha B3/C1), according to Vasić.⁵³

Tasić's dating of the Bosut II–Basarabi phase was also challenged by Medović with some earlier dates, placing the second phase of the Group between the mid-eighth and mid-/late sixth century BCE.⁵⁴ Miloš Jevtić, another significant Serbian archaeologist who researched the Basarabi horizon, considered Insula Banului and Kalakača pottery a contemporaneous occurrence, and a first phase of the “Basarabi culture” in the Serbian Danube region, dated from the mid-ninth to the mid-eighth century. Basarabi II, a horizon with Basarabi style pottery, and Basarabi III, a horizon of the Zlot cave finds, were dated from mid-eighth to the

⁴⁸ Medović & Medović 2010, 271.

⁴⁹ Metzner-Nebelsick 2002, 384; Pare 1998, 371; Pare 2017, 38.

⁵⁰ Vasić 1987a, 544.

⁵¹ Ložnjak Dizdar 2004, 20.

⁵² Vasić 1999, 27–28.

⁵³ Vasić 1987a, 542–545.

⁵⁴ Medović 1978, 43–45, 52–55; Медовић 1990, 29–30; Medović & Medović 2010, 272.

mid-seventh, and the mid-seventh to the mid-sixth century BCE, respectively.⁵⁵ Rastko Vasić accepted the dating of the beginning of the Bosut II–Basarabi phase to the mid-eighth century, with the style finally going out of fashion around the end of the seventh century, according to the pottery analysis by Dragan Popović.⁵⁶

Nikola Tasić saw the origin of the Basarabi horizon in the preceding *Insula Banului* and *Pšeničevo–Babadag* groups coming from the East, whose pottery style was spread westward by mobile cattlemen,⁵⁷ but also stressed the importance of the growing “Thraco-Cimmerian” phenomenon that coincides with it.⁵⁸ Medović, Jevtić, and Vasić all considered the migration of peoples from the East as a possible mechanism of the spread of the Basarabi pottery style, with a probability of trade, and development from local traditions.⁵⁹ In modern archaeology, the migration concept could seem outdated, but it cannot be considered entirely untrue. If we reshape the model through which we perceive population movement in the past as a process composed of smaller scale movements, rather than a large-scale event, it is plausible that such a mechanism could have facilitated cultural transmission. Since there is no archaeological record corroborating an extensive flow of people, movement of individuals would seem a viable agent for spreading a trend such as the Basarabi style pottery. Archaeological literature in recent years recognises advanced models of cultural interaction based on a revised understanding of human mobility in late prehistoric South-eastern Europe, in an attempt to explain cultural changes manifested through material remains.⁶⁰ In the case of the middle phase of the Bosut group, chronological correlation in the spread of Basarabi style pottery and the so-called “Thraco-Cimmerian” finds was noted. However, since the Basarabi phenomenon was formed in contact with neighbouring groups from the East, the same cannot be said about the geographical correlation. Elements of Eastern-nomadic qualities recorded in the Western Balkans likely arrive from the North, namely from the “pre-Scythian” archaeological group of the

⁵⁵ Jevtić 1993, 391–400.

⁵⁶ Vasić 1987a, 545–554.

⁵⁷ Тасић 1983, 124–125.

⁵⁸ Tasić 1971a, 69–70.

⁵⁹ Medović 1978, 58; Vasić 1987a, 545–554; Jevtić 1993, 391–400.

⁶⁰ Metzner-Nebelsick 2010; Bulatović, Molloy & Filipović 2021.

Great Hungarian plain, rather than directly from the Pontic–Caspian steppe.⁶¹

The last phase – the Bosut III–fluted pottery phase – was dated from the mid-/late sixth to the early/mid-third century BCE by Predrag Medović.⁶² A lengthy timeframe from the beginning of the sixth until the end of the fourth century seemed plausible to Vasić, considering a layer on the Gradina na Bosutu site that is twice as thick as the previous layers.⁶³ Nevertheless, since various factors affect the complex postdepositional processes in forming the archaeological site strata, this remark should be taken with caution. What is visible, however, in the last phase of the Bosut group, is a clear distinction from the Basarabi horizon, now with elements reminiscent of pottery from the Ferigile group in Oltenia, and the “scythoid” Ciurbrud group in Transylvania,⁶⁴ that could point to a population with a continuing adoption of impulses from neighbouring regions.⁶⁵

Knowledge on the Bosut group continued to be upgraded in the decades following its initial definition. Interesting relations were observed between the last phase of the Bosut group and the so-called “Syrmia group of the Western Balkans complex”, represented entirely by grave finds in the area of Syrmia, and parts of Bačka.⁶⁶ A skeletal grave in the stretched position, with a typical set of jewellery and weapons (square-foot fibulae with a button-like protrusion, Certosa fibulae, Čurug type fibulae, astragal belts of the Syrmia type, zoomorphic bracelets, glass beads, curved swords, a leaf-shaped spearhead, etc.), appeared in the timeframe between the sixth and fourth centuries BCE,⁶⁷ and despite the apparent chronological and geographical accordance with the final phase of the Bosut group – that is, in contrast, defined primarily by pottery production – the confirmation of their association in common archaeological finds is still modest.⁶⁸

⁶¹ Metzner-Nebelsick 2002; Kemenczei 2003; Нинчић 2019.

⁶² Medović 1978, 52–55; Медовић 1990, 29–30; Medović & Medović 2010, 272.

⁶³ Vasić 1987a, 545–554.

⁶⁴ Jevtić 1983, 37–38; Vasić 1987b, 670.

⁶⁵ Ljuština 2010a; Ljuština 2010b.

⁶⁶ Гарашанин 1973, 511–515.

⁶⁷ Гарашанин 1973, 511–515; Filipović & Mladenović 2017; Dizdar & Tonc 2018.

⁶⁸ Popović 1981, 37–41; Medović & Hansel 2006; Medović 2007; Ljuština, Ninčić & Radišić 2019.

Conclusion

Nikola Tasić's work on painting a picture of the Early Iron Age in the western parts of the Serbian Danube region came after an inspiring abundance of new data during the second half of the 1960s and early 1970s. Detected local particularities in the material culture, primarily in the ceramic products, motivated Tasić to differentiate a separate archaeological group. The immense importance of this move enabled researchers to observe the mentioned area through the lens of a unique developmental path, rather than within larger complexes coming from the East and West. The Bosut group quickly became synonymous with the EIA in the western Serbian Danube region.

More than fifty years have passed since the original publication that announced the separation of the Group. Tasić at the time outlined the chronological frame and main material and symbolic culture traits that defined the Group. In the following decades, many revisions and supplements to the core definition were presented by distinguished researchers of the EIA in Serbia, mostly regarding the dating. Famous archaeologists like Predrag Medović, Rastko Vasić, and Milutin Garašanin contributed to the more precise chronological picture of the Group, with a tendency to push towards somewhat earlier dates. Considering the place of origin and the transfer mechanisms of Basarabi influences, Tasić's idea of migratory movement today seems rather obsolete, though some form of human mobility in the past could have contributed to its spread. Similarly, the chronological correlation between the spreading Basarabi trend and the emergence of the so-called "Thraco-Cimmerian" finds cannot be supported in the geographical sense, according to the accumulated data on the origin of the objects of Eastern-nomadic qualities.

Despite all the revisions and supplements to the initial publication on the Bosut group, it is clear that its main postulates still hold, and form the backbone of the cultural picture of the EIA in the western Serbian Danube region. The decisive role that Nikola Tasić played in the differentiation of the Group demanded a lot of scientific courage and forward thinking, which resulted in a solid base for further archaeological research of the topic. More than half a century later, interpreting the Bosut group remains one of the brightest achievements in Nikola Tasić's academic work.

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Aleksandar Jašarević*

Museum in Doboј

Doboј, Republic of Srpska

Bosnia and Herzegovina

An Early Iron Age burial from Dobor (northern Bosnia)

Abstract: The paper presents a chance find, designated as a grave assemblage from the site of Dobor near Modriča in northern Bosnia. The assemblage consists of three bronze bracelets, a bronze pendant, eleven bronze calotte-shaped buttons, and a fragmented ceramic vessel. The bronze pendant of the Ghidici type provides a basis for dating the deposited objects to the first half or middle of the eighth century BC at the latest, i.e. to the Ha C1 of the Central-European chronology. The micro-location of the Early Iron Age burial is directly linked with the settlement site of Doborski Brijeg and the excavated Late Bronze and Early Iron Age layers. The fragments of pottery decorated in the Basarabi style suggest the regional importance of the settlement as a possible intermediary in the exchange of cultural goods and influences coming from neighbouring regions, primarily Slavonia and Sirmia (Srem/Srijem), along the Bosna river valley.

Key words: Early Iron Age, northern Bosnia, Dobor, Basarabi, Ghidici type pendant

Introduction

The Archaeological Collection of the Doboј Museum includes a group of artefacts from the site of Dobor in Jakeš near Modriča, northern Bosnia. The brief notes in the museum records designate them as a grave assemblage with a few remarks about the circumstances of their discovery. The group consists of three bronze bracelets, a bronze pendant, eleven bronze calotte-shaped shank buttons, and a fragmented larger ceramic vessel (Fig. 2). The artefacts were discovered at an elevation 0.5 km south of the fortress of Dobor, on the trail of an ancient car-

* aleksandar.jas@gmail.com

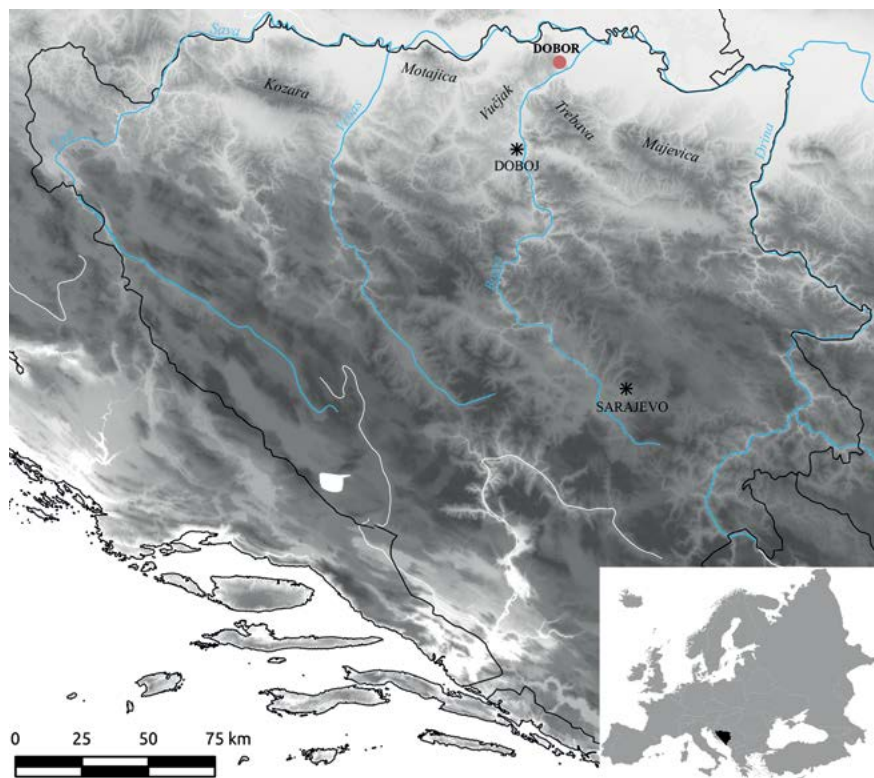


Fig. 1 Topography of the site area.

avan road running north to south along the Bosna river. According to the finder, the objects were gathered in one place and there was no trace of bones, which by itself raises the question of the character and original archaeological context of the find.

The micro-location of the find is inseparably linked with nearby Dobor and the archaeological layers documented on that site. Dobor, also known in the literature as Dobor–kula and Gradina–Dobor, sits on a gentle but commanding slope between the left bank of the Bosna river and the Munjača stream (Fig. 1).¹ The easiest route from Posavina and Slavonia to the interior of Bosnia runs through the Bosna river valley and its wide canyon between the fringes of Mt Vučjak and Mt Trebava. Do-

¹ Bojanovski 1981, 11.



Fig. 2 Grave assemblage from Dobor.

bor was built at the entrance to the canyon and is rightly dubbed “the gate of Bosnia”.² Archaeological investigations have shown that the primary location was used in the mediaeval period for constructing a fortification which was in use during the Ottoman period as well. The south section of the site, named after the toponym Doborski Brijeg (hill) and cut off by a deep artificial ditch, saw a long period of occupation. Prehistoric finds belong to stratified hillfort settlements of the Chalcolithic Kostolac and Vučedol cultures, a settlement of the Late Bronze and Early Iron Age, and a hamlet from the end of the Iron Age.³

Analysis of the archaeological material

The category of annular jewellery includes three typologically different and unequally preserved bracelets. One is circular in shape with its ends

² Јашаревић 2015, 30.

³ The archaeological material has not been published. It is deposited in the Archaeological Collection of the Doboj Museum. Belić 1986, 14–15, and Belić 1988, 76.

wide apart, undecorated and oval-sectioned (Pl. I: 1). Analogies are encountered in the northern-Bosnian hoards of Srebrenik,⁴ Srpska Varoš,⁵ Bokavić,⁶ Laušević,⁷ and Tešanj 2.⁸ They occur in two variants: penannular, and with slightly overlapping ends. The same shapes occur in northern-Croatian hoards of the Ha A period, that is, phase II of continental-Croatian hoards.⁹ Another type is also a simple undecorated bracelet, thin, almost square in cross-section, with pointed ends which barely touch one another (Pl. I: 2). One end is broken. This type is very rarely found in hoards, the exception being the pieces from Bokavić¹⁰ and Tešanj 2.¹¹ Their occurrence north of the Sava is only sporadic. Thus the bracelets from the Nemojany 2 hoard in Moravia had been dated to the Muškov 2 horizon of the Ha A1 period.¹² The third piece is a circular-sectioned bracelet fragment decorated with spaced groups of incised lines (Pl. I: 3). This type is represented by pieces from the hoards of Medno Polje, Monj, and Tešanj 2.¹³ They are between 9 cm and 11 cm in diameter. Sets of several bracelets, frequently deliberately broken, have been recovered from the Mačkovac, Bokavić, Srebrenik, and Srpska Varoš hoards.¹⁴ Single specimens have been found in the Rohod hoard in north-eastern Hungary and the Romanian Sălard and Șpălnaca hoards. The finds from Slovakia (Trenčianske Bohuslavice) and northern Hungary (Nádudvar) complement the picture of their geographical distribution.¹⁵ Their noticeable concentration in northern Bosnia favours local production.¹⁶ Their date, based on the internal context of hoards, covers phases 3 and 4 of the hoards of Bosnia and Herzegovina, that is, the Ha A1–Ha B1 period ac-

⁴ The material from the hoards has not been published in its entirety. Blečić Kavur, Jašarević & Mutapčić 2016, 55–56.

⁵ König 2004, T. 50: 3.

⁶ *Ibid.* T. 45: 177–178.

⁷ *Ibid.* T. 31: 3.

⁸ *Ibid.* T. 33: 16, 22; T. 36: 52, 55, 62.

⁹ Potrebica & Ložnjak-Dizdār 2004, 20; T. 2: 3.

¹⁰ König 2004, T. 45: 178; T. 46: 190, 207; T. 50: 2, 4, 14.

¹¹ *Ibid.* T. 36: 60.

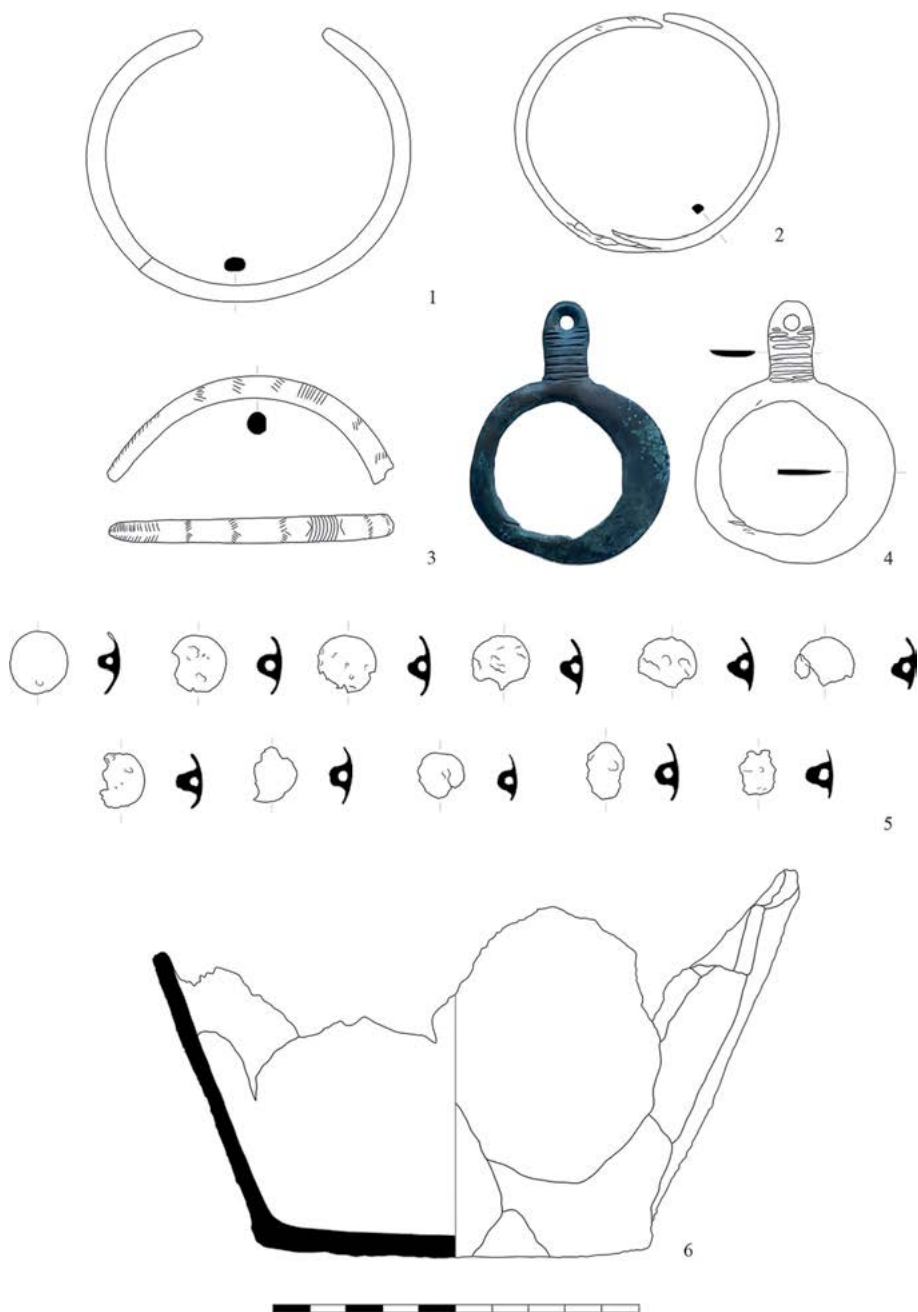
¹² Salaš 2005, 88, T. 225B.

¹³ König 2004, 52, 10–54, 40; Jamaković 2011, 94. T. 2:2.

¹⁴ König 2004, T. 44: 148–180; T. 45: 161–170; Gavranović 2011, 205; Blečić Kavur, Jašarević & Mutapčić 2016, 55–56.

¹⁵ König 2004, 114.

¹⁶ Gavranović 2011, 205.



Pl. 1 Grave goods from Dobor.

cording to Central-European chronology (thirteenth–eleventh c. BC).¹⁷

Standing out in the same category of annular jewellery is a piece of particular symbolic value, a distinctive bronze pendant. Its asymmetrical circular body is topped by a perforated rectangular handle (Pl. I: 4). The front side of the body is slightly convex, the backside is flat. The handle is decorated with deep transversal incisions, and the small hole in its upper part suggests that the pendant was either suspended from some other utilitarian-decorative object, or an element of costume in its own right. Typological features of this pendant type have been established by I. Kilian Dirlmeier, and it corresponds to the Ghidice type.¹⁸ In a broader contemporary context, the distribution area of this type of pendant includes the Northern and Central Balkans, the eastern Carpathian basin, North Macedonia, southern parts of Greece, and Albania.¹⁹ New work has shown a much wider geographical distribution of the Ghidice type pendant. The easternmost boundary has thus been set by the new finds from the temple of Apollo at Klaros on the coast of ancient Ionia,²⁰ modern western Turkey, while its westernmost distribution includes the pieces from Glasinac (Plješevica I/1 and Crvene Lokve II).²¹ Its direct and closest parallel is also the new find from the necropolis of Kopilo near Zenica, which sits on the same south to north route along the Bosna river.²² In the Balkans and the eastern Carpathian basin, Ghidici type pendants are among the leading shapes in the earliest horizon of the Early Iron Age,²³ occurring throughout the eighth century BC.²⁴ The contexts place their dates within the span between the Ha B3 and Ha C1 periods of the Central-European periodisation, but they remained in use much longer, up to the Early Iron Age. As for the Early Iron Age cultures in the Danube valley, they are characteristic of the cultures of the so-called Basarabi complex.²⁵ In terms of quantity, they are the most numerous in Early

¹⁷ König 2004, 22–23; Blečić Kavur, Jašarević & Mutapčić 2016, 59.

¹⁸ Јевтић 1994, 80; Јевтић 2006, 281.

¹⁹ Pabst 2008, 610; cf. Васић 1988, 5.

²⁰ Gülşah 2019, 17.

²¹ Čović 1981, 118, 120; Kilian-Dirlmeier 1979: 6–10; Јевтић 1994, 82; Pabst 2008, 623.

²² Gavranović et al. 2023, 6, Fig. 6.

²³ Pabst 2008, 610; cf. Васић 1988, 5.

²⁴ Kilian-Dirlmeier 1979, 9; Gergova 1987, 64; Јевтић 1994, 82–83; cf. Vasić 1977, 16.

²⁵ Јевтић 2006, 281; Pabst 2008, 596.

Iron Age hoards (Ghidici, Archar, Koshava–Yasen, Rujište),²⁶ then as chance finds,²⁷ as grave goods,²⁸ and as votive offerings in Greek shrines.²⁹ However, the annular pendant as part of female costume has also been found in grave AZ VII at Vergina, which is one of the earliest pieces, dated to the middle or second half of the ninth century BC at the latest.³⁰ Especially important are the pendants from grave 15 at the Lisičin Dol necropolis in Marvinci, which provide clear evidence for their use as a dress accessory).³¹ They formed part of a lavishly decorated leather belt and, with other bronze ornaments belonging to the so-called Macedonian bronzes, defined the costume of a wealthy female member of the community, most likely a priestess.³² The grave has been dated to phase II 2 of the Iron Age of North Macedonia, that is, to the seventh century BC.³³ The clear find context leads to the conclusion that such pendants formed part of the costume as a rule attributed to the female deceased. The pendants recovered from temples, especially in the context of the temple of Apollo at Klaros and the altars dedicated to Artemis and Leto, suggest that rather than being mere everyday objects, they had some religious function, possibly as parts of priestesses' attire or as votive offerings.³⁴ It may be interesting to note that no traces of gilt have been found on them, which was a local tradition observable on virtually all bronze objects discovered at Klaros. It seems therefore that these pendants were not locally manufactured but imported sometime in the eight or early seventh century BC.³⁵

Among smaller decorative bronze artefacts are simple calotte-shaped shank buttons, a total of eleven pieces, 1.5 cm in diameter (T. 1: 5). These are widely distributed, chronologically scarcely sensitive artefacts, which occur in graves and somewhat less frequently in hoards in the final phases

²⁶ Васић 1988, 6; Јевтић 1994, 82.

²⁷ Васић 1988; Јевтић 1994, 82, T. I: 7–10; Jankovits 2017, 179, T. 68: 2449–2451, 2453–2455.

²⁸ Pabst 2008, 610; Mitrevski 2007, 564.

²⁹ Kilian-Dirlmeier 1979, 6–8; Gülşah 2019, 17–18.

³⁰ Pabst 2008, 614, 616.

³¹ Митревски 1999: 88; Mitrevski 2007, 564.

³² Mitrevski 2007, 566.

³³ Mitrevski 2007, 575; Pabst 2008, 610.

³⁴ Gülşah 2019, 17.

³⁵ *Ibid.*, 18.

of the Late Bronze Age.³⁶ They were usually sewn to garments, belts, aprons, and various types of headwear. Their distribution indicates a broader area of the Balkans from the Danube valley to the eastern-Alpine region. The composition of grave assemblages at the necropoleis of Brežec near Škocjan, Dobova, and Pobrežje, suggests the buttons were part of female dress.³⁷ The contemporary necropoleis in the Karst region and Istria as well as the Slovenian Sava and Drava river valleys show the same frequency of this type of ornament.³⁸ At the Vajuga–Pesak necropolis in the Đerdap (Iron Gates) area, they have been documented in the wealthiest female graves of the eighth century BC,³⁹ and the picture is much the same in the graves at Dalj in the Croatian Danube valley.⁴⁰ In and south of the Bosnian Sava valley, they are a rare occurrence before the Early Iron Age, with the exception of the buttons from the Otok hoard near Vitina in Herzegovina, also attributed to rich female dress,⁴¹ and several pieces from the Gornji Zalukovik hoard in eastern Bosnia.⁴² Their mass production and use as a clothing accessory begins in the Early Iron Age. At the necropolis in Donja Dolina they are the most frequent in phase 2a-b, or the seventh–sixth century BC. At Glasinac they first appear in phase IVb and continue until phase Va, that is, throughout the Early Iron Age horizon.⁴³

Of the ceramic vessel only the base and lower body has survived, not enough for a more precise typological attribution or dating. The surface is roughened, the fabric tempered with a significant fraction of grit, and fired to light red.

Discussion and concluding considerations

Although the archaeological record from Dobor is considerably fragmented, some ornamental artefacts give some grounds for a chronological and cultural interpretation. This primarily goes for the Ghidici type

³⁶ Gavranović & Jašarević 2016, 107.

³⁷ Teržan 2016, 295.

³⁸ *Ibid.* 295–296.

³⁹ Popović & Vukmanović 1998, 84, T. 5: 13; T. 18: 14–30.

⁴⁰ Metzner-Nebelsick 2002, T. 51: 7; T. 99: 19.

⁴¹ König 2004, T. 68: 4–11; Gavranović 2016, 100, Abb. 6.

⁴² König 2004, T. 22: 233–239.

⁴³ Јашаревић 2015, 9–10.

pendant, which provides the only reliable evidence for dating the deposited objects to the first half or middle of the eighth century BC at the latest, that is, to the Ha C1 period of Central-European chronology. The reconstructed collection may have been part of a grave assemblage. During the Late Bronze and Early Iron Ages in northern Bosnia, or in the lower Bosna river valley and the area of Mt Majevisa, the prevailing burial practice was inhumation.⁴⁴ Most of the artefacts from Dobor point to an ornamental ensemble adorning female costume. The bracelets are objects whose known parallels occur exclusively in hoards of northern Bosnia;⁴⁵ these types of bracelets have not yet been found in burial contexts at contemporary necropoleis in the nearer region (e.g. the necropolis in Jablanica).⁴⁶ A possible interpretation is their long transgenerational use, which seems to be substantiated by visible wear and fragmentation. This, in any case, ensured support to potential curation and significance of the objects long kept as part of traditional values before being deposited.⁴⁷ Burial assemblages frequently contain objects that played the role of a purposely deposited “old piece” (*altstück*), an “heirloom”. This has been interpreted as the ritual of handing down and offering votive gifts practised by the elite, who thus demonstrated the continuity of their social and cultural ideology and established tradition. Their deposition into a grave is thus a reflection of the symbolism and traditional values of particular importance to the deceased woman and the living members of the community who read a distinctive narrative from that act.⁴⁸ Taking into account the location not far from the hillfort settlement at Dobor and all that is currently known, we are inclined to interpret the discovered artefacts as a grave assemblage.

Archaeological excavations at the site of Doborski Brijeg carried out in 1978 unearthed layers of a settlement which chronologically corresponds to the period of the deposition of the grave goods, that is, the layers of the Late Bronze and Early Iron Ages or the later phase of the local Vis–Pivnica culture.⁴⁹ The most plentiful and the most varied class of

⁴⁴ Gavranović & Jašarević 2016, 97.

⁴⁵ König 2004.

⁴⁶ Gavranović 2011, 43–50, Teil II.

⁴⁷ Knight, Boughton & Wilkinson 2019, 6–7.

⁴⁸ Blečić Kavur & Kavur 2016, 250–252; Verger 2019, 259.

⁴⁹ Bulatović & Jašarević 2020, 96.

finds is the pottery of various shapes, sizes, functions, and ornamental styles. Its quality and typological diversity as well as the rich cultural layer itself suggest a hillfort settlement of regional importance, possibly a mediator of cultural influences from neighbouring areas, Slavonia and Syrmia in particular. This is favoured by pottery fragments decorated in the Basarabi style. Three such fragments have been discovered. One of them shows the classical Basarabi-style decoration and traces of white incrustation (Fig. 3: 1). Below the faceted shoulder is a horizontal band filled with the characteristic motif of a running S-spiral from which cross-hatched triangles and festoons are suspended. The fabric of the vessel fashioned from well-sifted clay, fired to grey and burnished, stands apart from the overall pottery assemblage from Dobor and thus is likely an import. Typologically, it is akin to goblets with one or two handles rising above the rim, whose parallels recovered from the site of Gradina on the Bosut⁵⁰ and the necropolis of Vajuga–Pesak in the Đerdap area.⁵¹ The fragments also share some similarities with handleless goblets such as those from the site of Moldova Veche⁵² and the already mentioned Vajuga–Pesak necropolis.⁵³ The second fragment comes from a thinner-walled vessel decorated with a field filled with slanted lines above the spiral (Fig. 3: 2). The vessel is identical to the previous one in type, fabric, and decoration method. The last fragment comes from a pot with a markedly everted rim decorated on the inside with two bordered bands filled with an S-spiral (Fig. 3: 3). The fabric and shape of the pot suggest local production, that is, the 12B variant according to M. Gavranović's typology.⁵⁴ The shape also occurs in grave 9 of the Petkovo Brdo necropolis in Radosavska, dated to the Ha B3 period.⁵⁵

The Basarabi style or the ornamentation specific to the so-called Basarabi cultural complex originated in the south-eastern Carpathian basin and the lower Danube, becoming widely accepted by various cultural groups from the middle Dniester in the east and the north-western

⁵⁰ Medović 1978, T. XIV, 2; Medović & Medović 2011, T. XIX, 1.

⁵¹ Popović & Vukmanović 1998, T. 14: 2; T. 16: 10; T. 22: 12; T. 24: 1 have been dated to the first half or middle of the eighth century BC, Popović & Vukmanović 1998, 87.

⁵² Gumă 1993, T. XCV, 5.

⁵³ Popović & Vukmanović 1998, T. 33: 1, 11.

⁵⁴ Gavranović 2011, 63.

⁵⁵ Čović 1967, 163, T. II, 9.

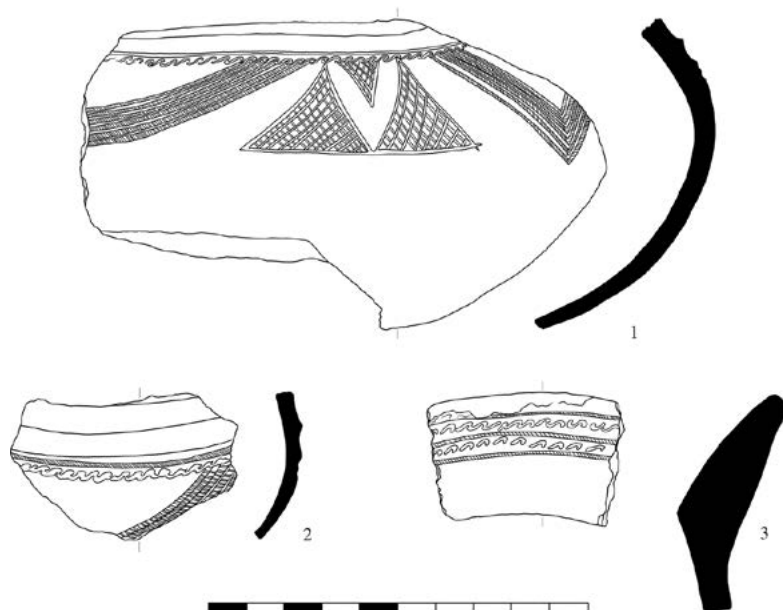


Fig. 3 Pottery decorated in the Basarabi style.

Carpathian basin to the south-eastern Alpine region.⁵⁶ The Croatian part of the Danube valley or the Danube–Sava–Drava communication route stands out as an important cultural corridor and the area through which this distinctive and appealing style spread westwards.⁵⁷ Eastern Slavonia and Syrmia were the areas of encounter between influences of the eastern Hallstatt cultural zone and the cultures of the Basarabi complex, that is, contact zones between two cultural groups, the Dalj and the Bosut one.⁵⁸ The influences spread across that area to reach as far as Carinthia and Styria in the west.⁵⁹ Local communities on this easternmost fringe of the Alps obviously found Basarabi motifs very appealing

⁵⁶ Vulpe 1979, 182. Abb. 1; Jevtić 1983, 36; Guma 1993, 208; Roeder 1997, 601; Зверев 2001, 224; Tasić 2005, 13–14; Kašuba 2007, 371; Metzner-Nebelsick 2007, 137–138; Jevtić 2016, 10; Metzner-Nebelsick 2017, 365; Dizdar, Hršak & Ložnjak-Dizdar 2019, 110; Ložnjak-Dizdar 2020, 157; Teržan & Bricelj 2020, 86; Conrad & Krauss 2020, 476.

⁵⁷ Metzner-Nebelsick 1992, 361; Eibner 1996, 108–109, and Eibner 2001, 182, 187; Ložnjak-Dizdar 2020, 158, and 2004, 23.

⁵⁸ Dizdar, Hršak & Ložnjak-Dizdar 2019, 111–112; Ložnjak-Dizdar 2020, 148.

⁵⁹ Vulpe 1979, 182; Metzner-Nebelsick 2002, 102–103.

and combined them with local pottery shapes.⁶⁰ In studying contacts and exchange, establishing a clear-cut chronology of material goods is exceptionally important. The Basarabi phase of the Bosut group has been dated to the eighth and first half of the seventh century BC, which corresponds to the Ha C1a and Ha C1b phases of the Central-European chronology.⁶¹

The exchange of prestigious goods and objects of special purpose, style, and shape followed other distribution routes as well, including northern and central Bosnia. The fashion and technology of decorating pottery in the Basarabi style spread southwards along the Sava and its tributaries. Apart from Dobor, this is evidenced by the pottery decorated with Basarabi motifs from the settlement site of Zecovi in the Sana river valley in north-western Bosnia, dated to the Ha B3–Ha C1 period;⁶² likewise, the vessels from the settlement site of Pod near Bugojno from the end of Pod B phase are also synchronous with the end of the Ha B3 period.⁶³ Geographically and culturally closest parallels have also been documented at the hillfort settlement site of Bare (Gradovrh) near Tuzla, with its characteristic potsherds decorated in the Basarabi style.⁶⁴ All this was taking place during the late phase of the Urnfield culture (ninth–eighth century BC), a period of substantial social, economic and ideological change. Hillfort settlements were increasingly built, local craft industries developed, the practice of cremation was steadily abandoned and an ever larger number of individuals, particularly from wealthier strata of society, were buried in an archaeologically more visible way – by inhumation. Richer and more numerous grave goods have opened up the possibility of gaining a clearer picture of the social stratification of the deceased, women in particular, or at least we are able to interpret it better owing to the quantity of finds.⁶⁵ Outstanding creative potentials in de-

⁶⁰ Metzner-Nebelsick 1992, 361, 368–370; Ložnjak-Dizdar 2004, 24; Metzner-Nebelsick 2017, 356; Dizdar, Hršak & Ložnjak-Dizdar 2019, 109.

⁶¹ Metzner-Nebelsick 1992, 364; Звечев 2001, 292; Metzner-Nebelsick 2002, 101; Metzner-Nebelsick 2007, 137; Pabst 2008, 591; Petrović 2010, 240; Medović & Medović 2011, 150–153; Jevtić 2016, 13; Metzner-Nebelsick 2017, 350; Dizdar, Hršak & Ložnjak-Dizdar 2019, 106; Ložnjak-Dizdar 2020, 148–149; Conrad & Krauss 2020, 474.

⁶² Čović 1965, T. II, 7; Ložnjak-Dizdar 2004, 25; Gavranović 2007, 52.

⁶³ Čović 1965, T. X, 2; Teržan 1995, 353, Abb. 21:7; Roeder 1997, 613; Ložnjak-Dizdar 2004, 25; Gavranović 2007, 44.

⁶⁴ Gavranović 2007, 58.

⁶⁵ Gavranović & Jašarević 2016, 94–95.

signing and manufacturing bronze objects also developed. Settlements came to be founded on locations controlling strategically important points in the landscape. Dobor among them, which controlled the lower course of the Bosna river towards the interior of Bosnia. A number of settlements and necropoleis recorded south of it testify to dynamic communication and contacts during the period in question. Individual mobility resulted in the presence of objects of non-local origin. The bimetal fibula with the ribbed bow from the Lipac necropolis near Doboj also reveals ties with the Danube cultures.⁶⁶ The fibulae of the same type from the site of Renovo near Šarengrad, which belongs to the Dalj group, were found in association with a goblet decorated in the Basarabi style dated to the eighth century BC.⁶⁷ The Ghidici type pendant from the Kopilo necropolis near Zenica also suggests influences from the Danube valley.⁶⁸ All of this speaks in favour of a lively interaction and cultural impulses coming via Slavonia and Syrmia and spreading further afield along the Bosna river valley. It is not surprising then to find Basarabi-style pottery or Ghidici type pendants at some distance from their area of origin.

Catalogue

1 Penannular bronze bracelet, oval-sectioned, undecorated, patinated, deliberately broken. Dimensions: L. 9.5 cm; W. 7.2 cm. Pl. I: 2.

2 Penannular bronze bracelet with slightly touching pointed ends, square-sectioned, undecorated, patinated. Cracks in the middle of the body. Dimensions: L. 7 cm; W. 6.2 cm. Pl. I: 2.

3 Bronze bracelet fragment, circular-sectioned, decorated with spaced groups of incised short lines, patinated. Dimensions: L. 4.5 cm; W. 7.5 cm. Pl. I: 3.

4 Bronze annular pendant. Asymmetrical circular body topped by a rectangular handle with a rounded terminal. Handle decorated with incised lines. Dimensions: H. 7.1 cm; W. 5.5 cm. Pl. I: 4.

5 Bronze calotte-shaped shank buttons. Eleven pieces. Dimensions: D. 1.5 cm. Pl. I: 5.

6 Ceramic vessel. Base and lower conical body preserved. Clay tempered with grit, fired to light red. Dimensions: H. 11 cm; W. 18 cm. Pl. I: 6.

⁶⁶ Jašarević 2022, 69–70, T. I: 1.

⁶⁷ Balen-Letunić 2004, 17; Ložnjak-Dizdar 2004, 22, and Ložnjak-Dizdar 2020, 157.

⁶⁸ Gavranović et al. 2023, 6, Fig. 6.

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Vera Bitrakova Grozdanova*

Macedonian Academy of Sciences and Arts

Department for Social Sciences

Research Center for Cultural Heritage “Cvetan Grozdanov”

Skopje, North Macedonia

Delogožda, Trebenište, Epirus, Magna Graecia

Résumé: Le déclin de l'époque préhistorique dans la région d'Ohrid est évident dans la phase archaïque de l'antiquité, fait constaté grâce aux horizons culturels découverts à Delogožda, Trebenište, Ohrid – Gorna Porta. Au VI^e siècle, deux coutumes sépulcrales s'entremêlent, tout comme les découvertes de la céramique de l'âge du fer, les vases attiques à figures noires, la riche vaisselle en bronze, offerts aux défunts. Cette contribution présente les nouvelles découvertes de la production du bronze archaïque débutant à Corinthe et dans le Péloponnèse, dont l'idée a été adoptée dans les ateliers des apoikiai sur les côtes des mers Ionienne et Adriatique. De ces centres, c'est grâce au commerce qu'elles atteignaient la région d'Ohrid.

Mots clés : Delogožda, Ohrid, Épire, Magna Graecia, vases de bronze archaïques

Écrire en l'honneur et en souvenir de l'académicien N. Tasić suppose rester dans le domaine de son œuvre, avec laquelle il a endetté l'archéologie préhistorique des Balkans. Mais, comme toujours, les frontières entre une époque culturelle et une autre ne sont pas nettement délimitées, elles se touchent, les traditions anciennes se succèdent, tout en intégrant de nouveaux éléments, pour laisser enfin une empreinte tout à fait reconnaissable dans ce que l'esprit humain apporte de plus récent. Ainsi, en tant que spécialiste de l'antiquité, je reviendrai à son époque la plus ancienne, lorsqu'on ne rompait pas facilement avec les manifestations culturelles de l'époque plus ancienne définie comme la préhistoire. C'est dans la région d'Ohrid, dans les localités découvertes ou recher-

* vbitrakova@yahoo.com

chées jusqu'à présent, telles que les nécropoles à Delogožda (6 km à l'ouest de Trebenište), à Trebenište ou à Ohrid même que je rencontre ces fils de connexion.

Les manifestations de l'âge du fer connues dans le sud-ouest des Balkans, plus précisément dans la région des lacs d'Ohrid, Malič, Prespa, sont constatées dans le tumulus de Delogožda (d'un diamètre de 11 m),¹ dont l'architecture, inhabituelle pour la région, se maintient jusqu'à la fin du VI^e siècle (T. I). A cette époque, dans la plaine d'Ohrid et le long de la côte apparaissent de nouvelles formes dans les rites sépulcraux visant à définir la résidence permanente. Dans la nécropole près de Trebenište² ou Tri Čelusi-Vrtuljka,³ ou à Ohrid même près de Gorna Porta,⁴ nous ne trouvons plus d'espaces clôturés circulairement dans lesquels sont placés les défunts. Delogožda est un exemple évident du déclin de l'esprit préhistorique que l'on retrouve notamment dans la vallée pas si lointaine de Korča,⁵ mais aussi plus largement dans toute la Macédoine antique. Voilà pourquoi les vases en céramique découverte à Delogožda (de la tombe 82) (T. II), issue de la production locale, et dans la région environnante est une forme qui définit les derniers siècles de l'âge du fer (VIII^e et VI^e siècles). On la retrouve dans les nécropoles de la plaine voisine de Korča à Kuči Zi I,⁶ à Vitsa,⁷ dans les tumuli de Vergina,⁸ mais aussi à Vrtuljka dans la région de la plaine d'Ohrid.⁹

Ce type de vaisselle, des vases biconiques avec deux anses très élevées au-dessus du bord, a été déposé lors d'un enterrement à Delogožda, ensemble avec un skyphos à vernis noir importé d'un atelier de l'Épire ou de l'Attique. La forme et le profil, typiques du cercle attique, permettent une datation précise dans la période entre l'an 520 et 500.¹⁰ Les objets de luxe importés ont introduit tout cet espace de la région d'Ohrid dans la nouvelle haute époque archaïque du monde égéen-adriatique.

¹ Bitrakova Grozdanova 1993, 166–177; Bitrakova Grozdanova 2017, 123–124.

² Filov & Schkorpil 1927; Вулић 1932, 1–41; Вулић 1933, 1–31; Popović 1966, 15–29.

³ Кузман 1985.

⁴ Kuzman 2018, 209–223.

⁵ Ceka 1975, 237–238; Andrea 1985, 241–259.

⁶ Andrea 1985, 172–175, T. XXX, 53, 54.

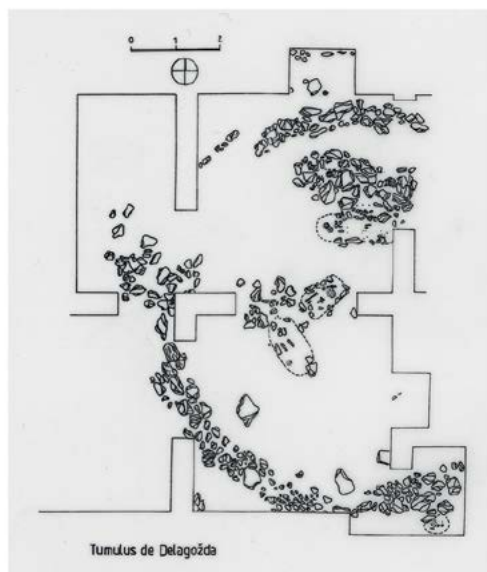
⁷ Vokotopouli 1986, 115, T. 109, n. 2204, pin. 177; 165, T. 134, n. 5206.

⁸ Andronikos 1969, 186–188, n. 17.

⁹ Кузман 1985, 48, 49.

¹⁰ Agora XII 403–405; Knigge 1976, 87, n. 12, T. 81.

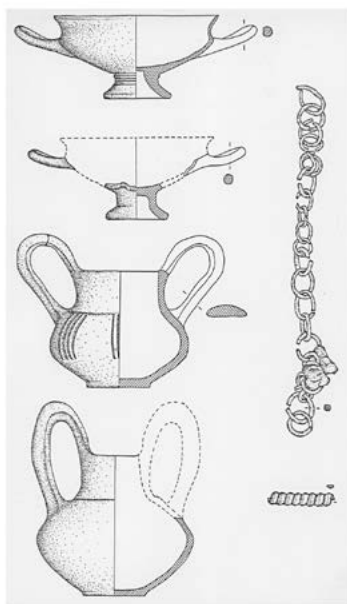
T. I



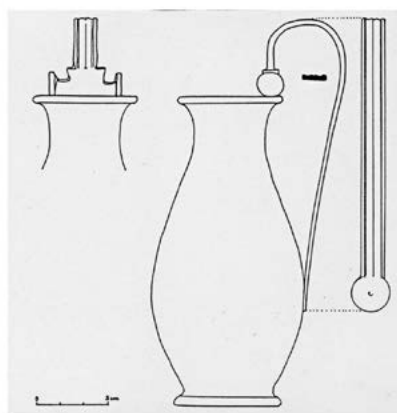
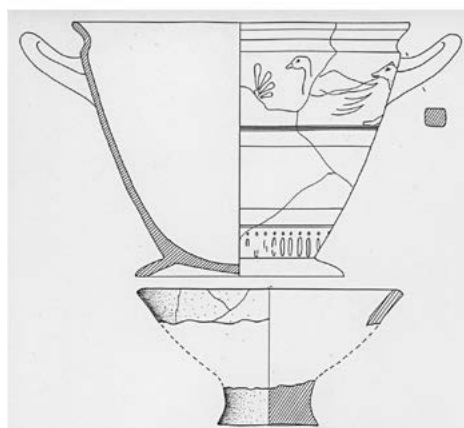
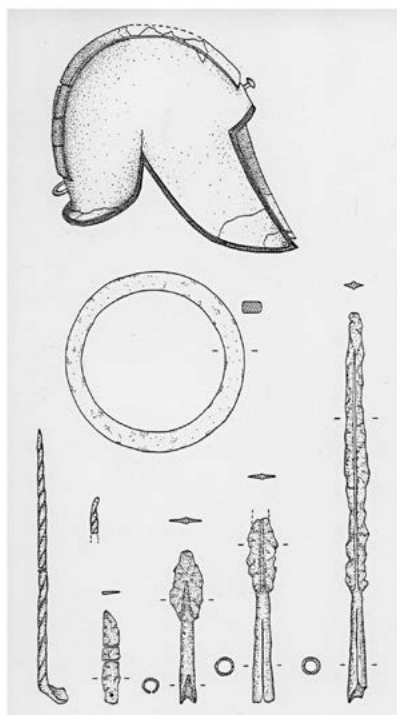
La céramique à vernis noir et aussi la céramique à figures noires (skyphos de la tombe n. 84 de tumulus, daté l'an 520–500),¹¹ (T.II) confirment l'entrée dans une nouvelle ère. Il y a également, dans une large

¹¹ Bitrakova Grozdanova 1993, 166–177; Bitrakova Grozdanova 2017, 129–131.

T. II



Tombe 82



Tombe 84

mesure, l'importation des récipients de luxe en bronze avec les créations figurales de ce temps au croisement des époques. Il s'agit de la vaisselle variée en bronze avec des représentations figurales dans l'esprit du style ar-

chaïque. C'est la vaisselle bien connue, cratères, onchoés, podanipters et autres. De nombreuses opinions ont été exprimées au sujet de l'origine de ce type de vaisselle, bien sûr en tant qu'importation de différents centres où, selon les sources, plusieurs ateliers travaillaient à cette époque. A cette occasion, à l'extraordinaire richesse de l'artisanat artistique en bronze, en tant qu'importation, découvert dans la région de Trebenište, je ajouterai quelques nouvelles découvertes du bronze archaïque de la région d'Ohrid, insuffisamment connues ou définies stylistiquement et chronologiquement, tout en me penchant sur la question de leur origine.

Les nouvelles recherches dans la région d'Ohrid ont mis au jour de nouveaux détails décoratifs en bronze qui appartiennent certainement à ce type de vaisselle importée. Pour ce qui est de la nécropole mentionnée près de Delogožda, du type tumulus, où les enterrements avaient lieu durant une période plus longue, allant de l'époque archaïque jusqu'au Moyen Âge, nous nous attarderons sur l'époque la plus ancienne. À côté de la vaisselle en céramique et les armes, dans la tombe No. 84 (T. II) se trouvait également une olpé en bronze (10 cm de hauteur). La forme imite le profil de vaisselle en céramique caractéristique de la production corinthienne, du type alabastron, du VI^e siècle. Le corps en forme de poire à anse placée très haut est complété par un autre détail. En effet, l'anse est ornée à son extrémité de deux petits disques posés dessus, un motif que l'on retrouve également sur un autre type de vaisselle en bronze avec une somptueuse décoration figurale de Trebenište, Votonosi, Vitsa, Sindos.¹² I. Vokotopoulou attribue la série de vaisselle découverte à Vitsa, de la collection Karapanos, de la collection du musée de Ioannina, ainsi que d'autres musées, à un atelier de Corinthe ou aux ateliers des apoikiai du cercle d'Épire.

Les opinions quant à l'origine de l'idée complète se trouvant derrière la production de la magnifique vaisselle, cratères, onchoés, hydrias ne sont pas inconnues. Les artisans corinthiens ont cherché et trouvé l'échantillon de base dans la riche production de céramique, qui était abondante aux VII^e et VI^e siècles. On sait notamment à quel point le commerce était alors répandu dans les espaces égéen et adriatique. Cette olpé de Delogožda d'aspect modeste, avec le détail typique qui renvoie à sa définition plus précise du point de vue de l'appartenance à un cercle artisanal, ouvre

¹² Vokotopoulou 1975, 783–785; Vokotopoulou Kouleimani 1975, 155–160; Vokotopoulou et al. 1985; Vokotopoulou 1986, 79–81, 288.

de nouvelles possibilités de discussion sur l'origine des bronzes archaïques de Trebenište. Le chef local, un soldat de Delogožda, a été enterré avec son casque et ses lances, accompagnés de cette olpé en bronze avec, en signe du plus grand luxe et respect, un skyphos à figures noires, toujours en provenance d'un atelier de céramique en dehors de la région d'Ohrid. Le travail précis et le profilage typique et, plus précisément, les profils analogues de skyphos de 510–500, permettent de le dater de la fin du VI^e siècle.¹³

La recherche de l'origine du skyphos en comparant la composition de la terre aux mêmes récipients du cercle de Chalcidique, ainsi qu'aux produits attiques et la consultation avec les chercheurs étudiant cette céramique ont montré qu'il n'est pas originaire de ces centres de céramique. La qualité de la peinture et de la terre, comparée aux découvertes analogues des colonies adriatico-ioniennes, suggère qu'il provient de ce cercle occidental d'ateliers de céramique. Un autre argument vient corroborer cette proposition. Dans les couches culturelles de la nécropole, avec une chronologie plus tardive, une céramique à figures rouges a également été découverte, provenant vraisemblablement des ateliers de la Magna Graecia.¹⁴ Cette conclusion est basée sur l'analyse stylistique des éléments décoratifs, typiques des ateliers de la Magna Graecia. Le commerce entre les deux côtes est évident,¹⁵ et confirmé par la route de l'ambre, qui est surtout tracé et présent à Trebenište, à Sindos, ce qui a été signalé à plusieurs reprises et prouvé par une analyse chimique.¹⁶

Cet aperçu est également nécessaire à la discussion sur l'origine de l'olpé en bronze. Ce type de vaisselle en bronze du type alabastron, avec une anse très relevée sans disques, a été découvert dans le trésor à Votonosi (près de Metsovo)¹⁷ et ressemble à un spécimen avec la même anse très relevée d'un musée d'Oxford. Mais il convient de noter que des anses de vaisselle en bronze à deux disques, avec ou sans décoration, probablement avec une vaisselle en forme d'alabastron (?), aujourd'hui conservées au Musée de Ioannina, ont été enregistrées sur le territoire de l'Épire.

¹³ *Agora* XII 567; Knigge 1976, 104, T. 80, 64.

¹⁴ Bitrakova Grozdanova 2019, 311–330.

¹⁵ Bitrakova Grozdanova 2013, 17, 18.

¹⁶ Palavestra 1993, 144–150; Palavestra & Крстић 2006, 244–258; Bitrakova Grozdanova 2011; Bitrakova Grozdanova 2012, 61–72.

¹⁷ Vokotopoulou 1975, 756–759.

Notamment l'une d'elles, de Dodone, datant de la première moitié du VI^e siècle, est identique à l'anse de Delogožda.¹⁸

Le profil de la vaisselle de Delogožda ressemble aux olpès en céramique des ateliers corinthiens du style géométrique tardif et de la céramique archaïque ancienne de style orientalisé, avec une anse fixée au bord avec deux disques.¹⁹ La riche production en céramique des ateliers du Péloponnèse, notamment de Corinthe, comme on le sait, représente à cette époque un produit de qualité largement vendu à l'intérieur, au nord de la côte égéenne. Je n'ai pas connaissance de l'existence d'une réalisation en bronze complètement analogue à celle de Delogožda. Le prototype de l'olpé de Delogožda devrait probablement être recherché dans les ateliers de céramique corinthiens. Je prendrais, à titre d'exemple, la luxueuse olpé de style orientalisé du musée du Louvre,²⁰ ou l'exemple de l'Albanie,²¹ ou l'olpé de Vitsa du VII^e siècle,²² évidemment à cause du profil analogue mais aussi à cause des disques placés vers le sommet de l'anse comme dans la découverte de Delogožda.

La question qui se pose est de savoir où elle est fabriquée. Dans les nécropoles bien connues du VI^e siècle, où de nombreuses vaisselles en bronze ont été posées à Trebenište, Sindos, Archontiko,²³ Novi Pazar ou dans le cercle d'Épire, cette forme d'olpé n'a pas été découverte. Évidemment, pour l'instant la réponse ne peut être qu'hypothétique, jusqu'à l'arrivée de nouvelles preuves. Elle serait fabriquée dans un des ateliers locaux de l'Épire et des apoikiai corinthiennes sur les rives de l'Adriatique. On connaît les efforts de plusieurs auteurs, notamment ceux des extraordinaires connaisseurs de cette activité artisanale artistique riche et variée, J. Koulimani Vokotopoulou,²⁴ C. Rolley,²⁵ pour localiser les ateliers des différentes vaisselles de l'époque archaïque.

Dans les fouilles de la nécropole de Delogožda, à l'extérieur des constructions funéraires, mais dans le cercle du tumulus, il a été décou-

¹⁸ Vokotopoulou Kouleimani 1975, 44–45, pin. 28b.

¹⁹ *Corinth* VII (2) 145, n. 143.

²⁰ Charbonneaux, Martin & Villard 1968, 70–71.

²¹ Ceka 1988, 235, n. 102.

²² Vokotopoulou 1986, 189–190, T. 142, pin. 304a.

²³ Chrysostomou & Chrysostomou 2002, 465–471; Chrysostomou & Chrysostomou 2003, 505–516; Chrysostomou & Chrysostomou 2009, 477–489.

²⁴ Vokotopoulou Kouleimani 1975, 102–140, 148–162.

²⁵ Rolley 1982, 73–85.

T. III



Delogožda



Ohrid

vert une application en bronze avec la représentation de tête de lion, le museau pointu, reposant sur les pattes avant.²⁶ On dirait que l'ensemble de la représentation est réalisé en bas-relief, frontalement, avec les oreilles également en face ; sur le front, entre les oreilles accentuées, est gravé un champ circulaire peu profond avec deux lignes semi-circulaires latérales (T. III). La stylisation archaïque est complétée par les deux yeux, claire-

²⁶ Bitrakova Grozdanova 2006, 562–563; Bitrakova Grozdanova 2013, 19, fig. 37.

ment sculptés en relief. Mais les paupières supérieures sont presque horizontalement abaissées, ce qui donne l'impression que l'animal est en état de somnolence. C'est un phénomène inhabituel pour les représentations archaïques où dominent les yeux grands ouverts. Sur une ciste de la Messapie (tombe Cavallino 1), l'application avec une représentation de lion sur l'anse est réalisée de manière très similaire.²⁷ Là aussi les yeux sont mi-clos, un trait renvoyant à une époque récente mais pas à un atelier proche en raison de la différence des autres détails du museau.

Tout d'abord, l'application de Delogožda, qui repose sur un seul ruban en forme de tube cylindrique, décoré de lignes gravées placées verticalement, au milieu et aux deux extrémités, est un détail percé sur sa longueur. En prolongement du ruban-tube il y a la réalisation plastique du protomé de lion. Il faisait apparemment partie d'une anse de cuve, d'un padanipter ou d'un exaleipteron. Des anses similaires ont été découvertes à Trebenište, mais sans représentations figurales.²⁸ Dans un exemplaire de la collection Karapanos²⁹ on retrouve une anse très semblable, avec un ruban et le protomé de lion, les oreilles placées frontalement, mais avec une crinière appuyée sur les côtés du visage. Dans cet exemple aussi, la paupière supérieure est imperceptiblement placée à l'horizontale. Il a été découvert dans le sanctuaire de Dodone. On trouve des représentations analogues très proches d'anses sur deux récipients de type lebès du tumulus de Novi Pazar,³⁰ avec des protomés de lion, mais les yeux sont encore grands ouverts.

Dans la série de représentations similaires d'anses sur les récipients du bronze archaïque tardif, le plus proche est cependant le protomé d'un récipient de type prochos de Gklava-Kato Meropi, de la tombe n° 8564 (localité au pied du Pinde, dans la région d'Épire).³¹ Le ruban y fait défaut, en revanche les yeux sont placés frontalement, les pattes sont du côté du museau et les paupières supérieures des yeux placées horizontalement sont particulièrement visibles. Cette représentation est la plus proche de l'exemple de Delogožda, ayant surtout en vue les yeux mi-clos. Le prochos de Kato Meropi date du premier quart du V^e siècle.

²⁷ Rolley 1991, 197–199, T. VI, VIII, IX.

²⁸ Filow & Schkorpil 1927, 31, Abb. 28.

²⁹ Karapanos 1878, Pl. XLV, 4–6.

³⁰ Mano-Zisi & Popović 1969, 205, T. 64.

³¹ Andreou 2000, 12–13.

L'application de Delogožda, malgré les similitudes avec certains exemples de l'Épire, de la Messapie, plus largement des fouilles balkaniques du bronze archaïque, possède tout de même quelques caractéristiques stylistiques qui lui sont propres. La linéarité d'une partie des détails renvoie à certains ateliers locaux qui imitent les ateliers célèbres. La possibilité de l'existence de plusieurs ateliers locaux dans les colonies de la côte adriatique, dans lesquels des produits en bronze étaient fabriqués d'après les échantillons de Corinthe ou de Sicyon a été soulignée à plusieurs reprises.³² Selon la manière stylistique de représenter les paupières en dépit de la plasticité du visage et les détails ciselés au front, ainsi que selon le ruban sur lequel elle repose, elle appartient à un vase fabriqué au début du V^e siècle, lorsque s'annonce le style strict de la nouvelle époque.

Dans les fouilles à Plaošnik de 2001 à 2010, une application de cavalier au pas lent a été découverte, posé sur une bande mince, légèrement incurvée comme base (T. III). La figure rappelle beaucoup les exemples des cratères de Trebenište³³ ou de Vix.³⁴ Mais le cheval d'Ohrid, posé sur une plateforme, avance doucement, contrairement au cratère de Trebenište du musée de Belgrade. L'application au verso n'est pas traitée plastiquement, ce qui montre clairement qu'elle reposait sur une surface en bronze, c'est-à-dire sur un récipient en bronze.

Si l'on essaye de dater l'application avec plus de précision, même si elle appartient manifestement à une vase, cratère (?) de l'époque archaïque, elle diffère des représentations de Trebenište. Ici le cheval n'est pas au galop, les jambes sont plus longues et son corps semble étiré. Le cavalier au petit corps est représenté tenant les rênes, mais sans traitement plastique de l'anatomie. Il fait penser à certains reliefs de la basse époque géométrique ou de la haute époque archaïque. On trouve une représentation similaire dans l'exemple de Dodone, au musée d'Athènes,³⁵ daté vers 580–570, mais avec un traitement plastique plus accentué.

L'application d'Ohrid appartiendrait à la haute époque archaïque selon la méthode de réalisation, même si les jambes avec les sabots ont déjà un traitement anatomique plastique. Si l'on compare la figure aux repré-

³² Charbonneaux 1958, 40–41, 72–74; Vokotopoulou Kouleimani 1975, 148–167; Rolley 2000, 435–440.

³³ Вулић 1932, 21–25; Василев 1988, 8–9.

³⁴ Joffroy 1962, 48–67.

³⁵ Dakari 1995, pin. 27; Vokotopoulou Kouleimani 1975, 145, pin. 52a–b.

sentations des reliefs en marbre analogues, l'application d'Ohrid daterait du début du VI^e siècle. Certes, l'application du cavalier appartenait à un récipient plus grand, probablement un cratère.

Ces quelques nouveautés qui rejoignent le cercle culturel connu de Trebenište confirment l'espace des centres déjà désignés où se trouvaient les ateliers du bronze archaïque, dont l'idée de base de la production a toujours été recherchée à Corinthe et dans le Péloponnèse. Lors des derniers efforts de conservation, la découverte de traces d'argile dans le processus de moulage, originaires d'Égine sur les reliefs du cratère de Trebenište – Musée national de Serbie, Belgrade,³⁶ a montré à quel point les opinions sur son origine du Péloponnèse et de Corinthe étaient justes. Les différences dans la finesse des détails incorporés dans les réalisations en relief de la décoration florale et figurale indiquent un caractère composite non seulement d'un seul et même atelier, ce qui a déjà été signalé. Le prototype, imité dans les différents centres de production de la vaisselle, a été complété par de nouveaux éléments stylistiques expressifs. Mais l'opinion en faveur d'ateliers du bronze antique artistique qui fonctionnaient dans les apoikiai en Épire et en Magna Graecia reste actuelle, tandis que le commerce mutuel, le marketing entre les deux rives de l'Adriatique, fonctionnait évidemment dans les idées de la production et dans l'échange réel des beaux produits.

³⁶ Ботини 2011, 102–105.

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Marko Dizdar*

Daria Ložnjak Dizdar**

Institute of Archaeology

Zagreb, Croatia

Early Iron Age Finds of Women's Costume and Jewellery from Orolik, Western Syrmia

Abstract: The finds from the site of Orolik–Rajterovo Brdo in western Syrmia include boat-shaped fibulae and a bracelet with stamp-shaped terminals that can be dated to the end of the seventh and the beginning of the sixth century BC. Outside of the explored Bosut group settlements, few women's costume and jewellery items have been found in graves from the period in Syrmia. The boat-shaped fibulae from Orolik, together with other fibulae of this form from Dalj group cemeteries in Baranya and eastern Slavonia, point to cultural connectivity with western Hungary. On the other hand, the bracelet with stamp-shaped terminals is a testimony of cultural contacts with the northern part of the central Balkans. Rajterovo Brdo also included younger finds of type Certosa fibulae of type V associated with the Syrmian group. The finds of boat-shaped fibulae and the bracelet with stamp-shaped terminals indicate that the beginning of the Early Iron Age in Syrmia and eastern Slavonia, regardless of their cultural dichotomy, was marked by different communication networks which are most visible in the characteristic items of female costume and jewellery. These items reflect cultural transfers from neighbouring regions which led to the creation of unique and hybrid combinations of women's costume.

Key words: Early Iron Age, Syrmia, boat-shaped fibulae, bracelet with stamp-shaped terminals, women's costume and jewellery, cultural connectivity

* mdizdar@iarh.hr

** dldizdar@iarh.hr

Introduction

The village of Orolik is situated to the east of Vinkovci in western Syrmia. The surroundings of Orolik contain a large number of sites from all periods including the Early Iron Age.¹ The site of Rajterovo Brdo (Karaševo), lying on an elevated position above the stream of Savak on the eastern edge of the village (Fig. 1), is the origin of the chance finds of two boat-shaped bronze fibulae and two ochre glass beads decorated with white and blue eye motifs, dated to the Early Iron Age.² The field surveys undertaken at the site in the last few years have found not only numerous

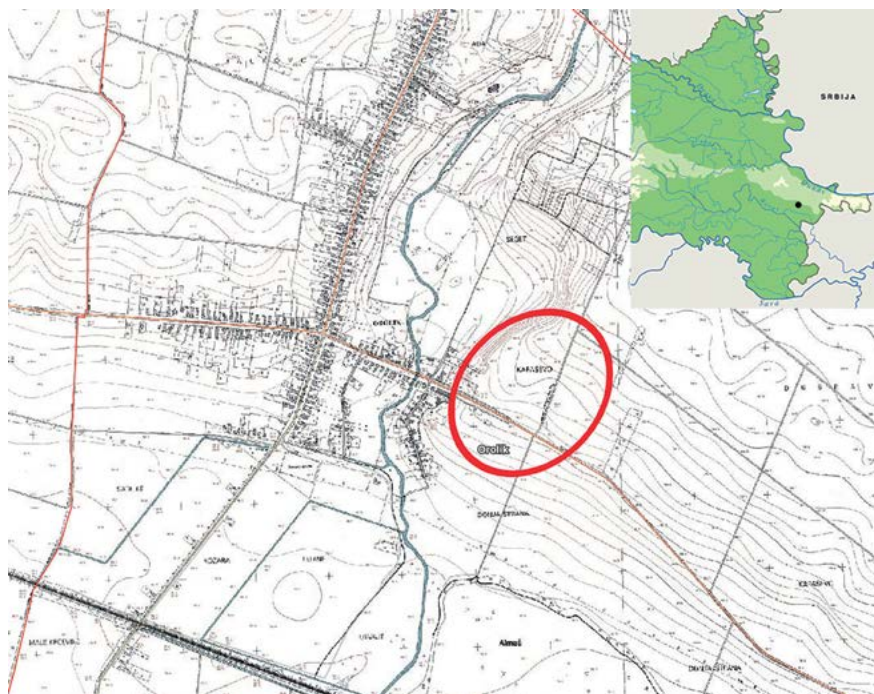


Fig. 1 Location of the Orolik–Rajterovo Brdo site in western Syrmia (made by: M. Dizdar).

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² Potrebica & Dizdar 2002, 81, 83, pl. 1/1, 3, 5–6.

Roman finds, but also some other finds that can be dated to the Early Iron Age, such as *certosa* fibulae of type V. A bronze bracelet with stamp-shaped terminals was found on the eastern edge of the site.³

Rajterovo Brdo has been known as a Roman site for more than half a century: small rescue excavations in 1967 uncovered a Late Roman grave, and there were numerous surface finds. Rajterovo Brdo was probably the site of *mansio Celena*, a settlement along the Cibalae–Sirmium road that is known from several ancient sources, and described as XI miles distant from Cibalae.⁴

Boat-Shaped Fibulae

The Archaeological Department of the Vinkovci Municipal Museum holds two boat-shaped bronze fibulae from the site of Orolik–Rajterovo Brdo (Fig. 2). The position of *Zadružno Dvorište* (“the communal yard”), south of the Vinkovci–Tovarnik road, included a small boat-shaped bronze fibula with a transverse rib in the middle of the bow. The rib is decorated with narrow oblique grooves, and ends with a small protrusion on each side. The foot is trapezoidal. A single coil of the unilateral spring has been preserved.⁵ Another boat-shaped fibula was found in the northern part of the site. The bow is partly damaged, but it had a group of transverse narrow grooves on both ends. On one end, the bow turns into a unilateral spring, while the other end is turned into a foot, which has not been preserved.⁶ The fibulae probably come from destroyed graves. Their brief analysis pointed out that they were a rare find at eastern Slavonian and western Syrmian sites, and that they indicated that the middle Danube region was connected with the eastern Alpine Hallstatt sphere. They are dated to the second half of the seventh and the beginning of the sixth century BC.⁷

³ I would like to thank my colleagues Hrvoje Vulić and Boris Kratofil from the Municipal Museum in Vinkovci for the Early Iron Age finds from Orolik. The bracelet was found in 2022 by M. Kovačević while farming.

⁴ Šaranović-Sveteck 1967, 109–111; Dimitrijević 1979, 186–187.

⁵ Potrebica & Dizdar 2002, 81, pl. 1/1.

⁶ *Ibid.* 81, pl. 1/3.

⁷ *Ibid.* 81.

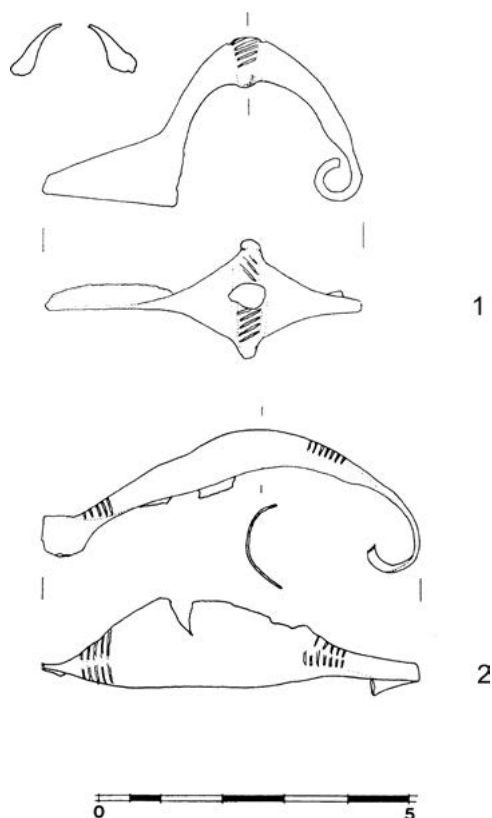
Boat-shaped fibula with central rib

Fig. 2 Boat-shaped fibulae from the Orolik–Rajterovo Brdo site (drawing by: M. Perkić).

The closest parallel for the boat-shaped fibula from Orolik, with a decorated transverse rib in the middle of the bow, is known from the Dalj group cemetery in Batina, the site of several boat-shaped fibulae of different types (Fig. 3). The transverse rib is decorated with grooves, has a small protrusion on both ends, and the foot is long.⁸ A boat-shaped fibula from Dalj also has a rib with a protrusion on both ends, but also a long and narrow trapezoidal foot.⁹ Boat-shaped fibulae with a decorated transverse rib – with or without protrusions at the ends, often making the bow look rhomboidal – are known from several sites in western Hungary, where they have been dated to Ha C2;¹⁰ a grave from the site of Keszthely–Árpád Utca 47 contained several fibulae with a decorated rib on the

bow, together with boat-shaped fibulae of the Šmarjeta type.¹¹ A fibula from Rifnik has a decorated rib ending with protrusions, and decorated with two groups of transverse ribs on each end.¹² The Hallstatt cemetery

⁸ Metzner-Nebelsick 2002, 421–422, 642, pl. 39/5; Nađ & Nađ 1964, 15, pl. XVII/2.

⁹ Metzner-Nebelsick 2002, 659, katfig. 19/5; Gallus & Horváth 1939, pl. XXXVIII/11.

¹⁰ Fekete 1986, 249, 253, fig. 1/6–7, 9–11; 2/8–13; 4/5–12 etc.

¹¹ *Ibid.* 249, fig. 3/1–3, 5.

¹² Teržan 1990, 100, fig. 24/3.

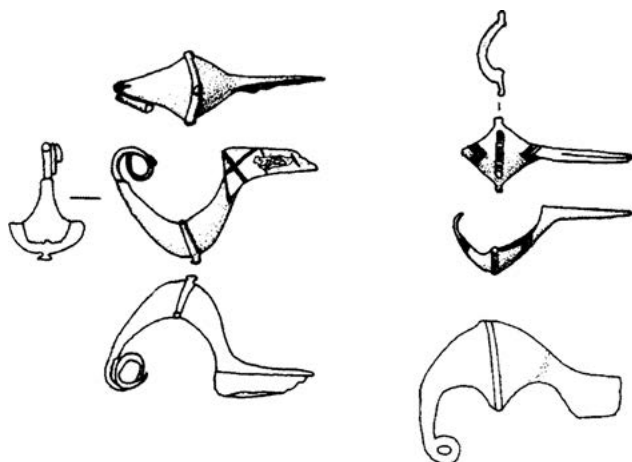


Fig. 3 Boat-shaped fibulae with a central rib from Batina (after: Metzner-Nebelsick 2002).

also includes three fibulae with a decorated rib and a small protrusion on each end.¹³ Boat-shaped fibulae with a rib decorated with transverse grooves have also been found at sites in Moravia.¹⁴

Another boat-shaped fibula from Batina has an undecorated transverse rib where the protrusion is not at the ends, but in the middle of the rib (**Fig. 3**). The foot is trapezoidal and decorated with an X-motif on one side.¹⁵ A direct parallel for this fibula is known from the Balatonboglár site.¹⁶ A third boat-shaped fibula from Batina also has an undecorated rib in the middle of a wider bow (**Fig. 3**); its foot is wider and rectangular, with a unilateral spring with a preserved single coil.¹⁷ A similar small boat-shaped fibula with a transverse rib was found in grave 1 of tumulus XII in Goričan, dated to Ha C2,¹⁸ while the pottery is associated with horizon IIIb.¹⁹ Two fibulae with an undecorated rib on the bow

¹³ Glunz 1997, 108, pl. 38/1–3.

¹⁴ Říhovský 1993, 105, pl. 16/178–179.

¹⁵ Metzner-Nebelsick 2002, 421–422, 642, pl. 39/4; Nađ & Nađ 1964, 15, pl. XVII/5.

¹⁶ Fekete 1986, 254, fig. 4/2.

¹⁷ Metzner-Nebelsick 2002, 421, pl. 39/6; Nađ & Nađ 1964, 15, pl. XVI/2.

¹⁸ Vinski-Gasparini 1987, 198, pl. XXI/9.

¹⁹ Metzner-Nebelsick 2002, 421–422, 425, fig. 37a/11.

come from a tumulus at the site of Griže–Šešće, dated to the first half or the middle of the seventh century BC.²⁰ Fibulae with an undecorated rib with or without protrusions at the ends are also numerous at sites in western Hungary.²¹

Boat-shaped fibulae with a transverse rib in the middle of the bow, which can be decorated or undecorated and sometimes end with protrusions, have been singled out as the Pannonian-eastern Alpine variant of boat-shaped fibulae. They are distributed on sites in western Hungary and on the eastern edge of the Alps, but they appear as far as Moravia and central Italy, with their models found in Italy.²² Boat-shaped fibulae with a rib in the middle of the bow are classified by B. E. Glunz into two variants. The fibulae of variant A have a decorated rib and protrusions at the ends, while those of variant B have a decorated rib without protrusions at the ends. Variant A fibulae are described as being widespread from southern Italy all the way to western Hungary and Moravia, and favourite in Pannonia. They are dated to Ha C2, while variant B fibulae are most numerous in western Hungary.²³ Fibulae from Moravia with a decorated or undecorated rib and protrusions at the ends of the rib are also dated to Ha C2.²⁴

Since small boat-shaped fibulae with a decorated or undecorated rib in the middle of the bow are particularly numerous at sites in western Hungary,²⁵ the finds of fibulae from the Dalj group cemeteries in Batina and Dalj, and fibulae from Orolik, can probably also be seen as evidence of cultural contacts with that area.

Boat-shaped fibula with grooves

The closest parallel for the fibula from Orolik, decorated with groups of transverse grooves at the ends of the bow, is known from the Dalj group settlement of Sotin–Srednje Polje. The preserved half of the fibula has a bow decorated with a group of transverse grooves at the end

²⁰ Teržan 1990, 101, pl. 77/2–3.

²¹ Fekete 1986, 249, 253, fig. 1/1–5, 8; 3: 4, 6, 8.

²² Teržan 1990, 99, 219, map 14; Říhorský 1993, 93–94; Metzner-Nebelsick 2002, 421–422; Felcan 2018, 59, 61, fig. 7.

²³ Glunz 1997, 107–109, 188, map 28.

²⁴ Říhorský 1993, 93–94, pl. 15/153–155.

²⁵ Fekete 1986, 249, 253.

towards the foot, which is missing.²⁶ A fibula from the site of Sremska Mitrovica–Žitna Pijaca is decorated with a group of transverse grooves at both ends of the bow; the group towards the spring has another zigzag groove between the transverse grooves. The unilateral spring consists of two coils. The foot is narrow and long. The fibula is dated to the first half of the sixth century BC, and is associated with fibulae that have such a decoration and a spherical expansion at the end of the long foot.²⁷

Among the boat-shaped fibulae from the Donja Dolina cemetery, which includes different types of boat-shaped fibulae, the one closest to the Orolík fibula is the fibula from grave 3 at the ridge of M. Petrović Jr. The fibula has groups of transverse grooves at the ends of the bow.²⁸ It was classified as the Gogošu variant,²⁹ and dated to the end of the seventh and the beginning of the sixth century BC.³⁰ Grave 208 in the Csanytelek–Újhalastó cemetery, associated with the Vekerzug group, includes a boat-shaped fibula that had its spring with a pin broken and repaired with a rivet at the flat end of the bow. There is one group of transverse grooves at the spring end of the bow, and two groups at the foot end of the bow. The foot is trapezoidal. The grave also contained a bronze bracelet, five amber beads, and the lower part of a wheel-thrown jug; the grave is dated to Ha C2.³¹ Inhumation grave 13 in the Süttő cemetery included two boat-shaped fibulae, one of them with a bow decorated with three zigzag bands. The other fibula has low ribs at both ends of the bow, each of them next to a perforation towards the middle of the bow. The unilateral spring consists of two coils; the foot is long and narrow. The grave, containing ceramic vessels, animal bones, and a perforated boar tusk, is dated to the sixth century BC.³² This fibula thus differs from the group of boat-shaped fibulae with transverse grooves, but the similarity can be seen in the method of decorating the bow at the ends.

Boat-shaped fibulae with grooves at the ends of the bow were classified by H. Parzinger as form 3 fibulae, on the basis of the finds from

²⁶ Ilkić 1999, 20, 74, pl. XVIII/7.

²⁷ Vasić 1999, 87–88, pl. 44/662.

²⁸ Truhelka 1904, 90, pl. XLII/19; Gavranović 2011a, 193, fig. 179/6.

²⁹ After the classification by T. Bader (Bader 1983, 112, pl. 36/350), which is a wrong determination of this form of fibula.

³⁰ Gavranović 2011a, 193.

³¹ Galantha 1986, 73, 331, pl. 5/3; Kemenczei 2004, 94, fig. 8/1.

³² Novinszki-Groma 2017, 480, 489, pl. IV/2.

Býčí Skála. However, these fibulae have a long and narrow foot ending with a sphere with a trumpet extension.³³ Originating from northern Italy, they went across the Soča river towards Lower and White Carniola, and across the Alps towards the Hallstatt cemetery, and further away to Moravia and south-western Slovakia. It is pointed out that such fibulae have not been found at sites between the Danube and the Sava. Therefore, it is a north-eastern Alpine variant of boat-shaped fibulae that could have developed from fibulae with a ribbed bow, and is dated to horizon 6 or Ha D1, equivalent to the end of the seventh and the first half of the sixth century BC.³⁴ According to B. E. Glunz, boat-shaped fibulae with a group of transverse grooves at both ends of the bow are distributed in the eastern Alpine area, with the exception of a few sites in western Hungary, south-western Slovakia, and Moravia. The preserved specimens have a sphere at the end of the narrow foot.³⁵ A fibula of this kind seems to have been found in the Kisravazd hoard, but has been lost. Each end of the bow has two groups of transverse grooves. The long and narrow foot ends with a small sphere and trumpet extension.³⁶ Such fibulae with groups of transverse grooves are also known from the sites of Sághegy, Keszthely (foot not preserved), and Szőkedencs (foot not preserved).³⁷ A small boat-shaped fibula with transverse groups of grooves and a foot ending with a sphere and trumpet extension was found in cremation grave 4 in the Bitnje cemetery, together with two fibulae *a tre bottoni*, and one fibula with a strap bow.³⁸ Also, a fibula from Šmarjeta is decorated with groups of grooves, but its foot is not preserved.³⁹

Boat-shaped fibulae with transverse grooves at the ends of the bow, with or without a knob at the end of the foot, are known from the prominent fortified settlement of Smolenice–Molpír, where they are dated to Ha D1.⁴⁰ The Abrahám hoard also included fibulae without a knob at the

³³ Parzinger 1995, 16, pl. I/14–16.

³⁴ *Ibid.* 19, 261, fig. 6.

³⁵ Glunz 1997, 105–106, 187, map 27.

³⁶ Fekete 1973, 348, 352, fig. 6/57.

³⁷ Patek 1968, pl. XXVIII/16, 24; XLIX/7–8; XCIII/8.

³⁸ Gabrovec 1974, 290, pl. IV/1.

³⁹ Stare 1973, pl. 20/II.

⁴⁰ Dušek & Dušek 1984, pl. 50/II; 90/9; 100/8; Parzinger & Stegmann-Rajtár 1988, 162, 166, fig. 3/3; Parzinger 1995, 19; Novotná 2001, 80–81, pl. 20/207–208, 213.

end of the foot, or their terminal has not been preserved;⁴¹ the hoard is dated to the beginning of Ha D.⁴² These fibulae are also known from sites in Moravia,⁴³ and the Hallstatt cemetery.⁴⁴

Boat-shaped fibulae with groups of grooves at the ends of the bow are also classified by M. Novotná into two variants, depending on whether the end of the foot has a spherical expansion. However, the terminal is often not preserved, and it is emphasised that fibulae with a sphere represent the younger form.⁴⁵ J. Říhovský distinguishes boat-shaped fibulae in the same way – depending on whether they have a sphere at the end of the foot or not; bow decorations are considered less important and are used to recognise particular variants.⁴⁶ Regarding the Šmarjeta type of boat-shaped fibulae, H. Parzinger also concludes that those with a shorter foot and without a knob at the end are older, belonging to the second half of the seventh century BC (Ha C₂), while those with a longer foot and a knob at the end belong to the beginning of Ha D₁, that is, to the early sixth century BC.⁴⁷

Since the fibula from Orolík does not have a preserved foot, it cannot be determined more precisely, but it is quite probably a form that can be considered an influence from western Pannonia.

Certosa Fibulae of Type V

The site of Rajterovo Brdo included bronze Certosa fibulae of type V (Fig. 4), which are younger than the mentioned boat-shaped fibulae and the bracelet with stamp-shaped terminals. It is a particularly frequent form, which appears at the Syrmian group sites at the end of the sixth and in the first half of the fifth century BC, especially in women's graves that include other items of costume and jewellery.⁴⁸ The Certosa fibulae of type V from eastern Slavonian and Syrmian sites are considered as evidence of renewed contacts between the south-eastern Alps and the Dan-

⁴¹ Novotná 2001, 80–81, pl. 19/203, 205–206, 210–211.

⁴² Teržan 1990, 101.

⁴³ Říhovský 1993, 95, pl. 15/156–157.

⁴⁴ Glunz 1997, 105, fig. 27, pl. 37/7–8.

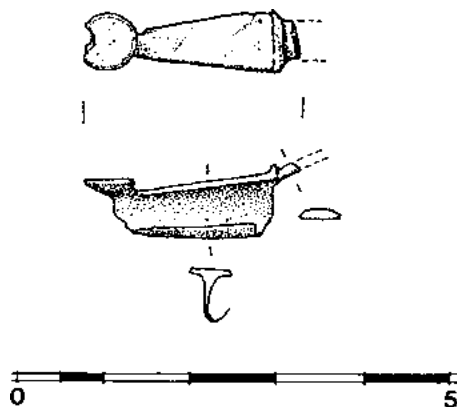
⁴⁵ Novotná 2001, 79–81.

⁴⁶ Říhovský 1993, 86.

⁴⁷ Parzinger 1995, 16, 19, 179, fig. 7.

⁴⁸ Dizdar 2019, 326–327, fig. 1/3; 3/1; 4/1–5; Dizdar 2020, 205, fig. 13.

Fig. 4 Certosa fibula of type V from the Orolik–Rajterovo Brdo site (drawing by: M. Marjanović Lešić).



ube Basin after the end of the sixth century BC.⁴⁹ Two glass beads decorated with white and blue eye motifs can probably be dated to the same time.

Bracelet with Stamp-Shaped Terminals

The eastern part of the site of Orolik–Rajterovo Brdo, also designated with the toponym of Karaševo, included not only numerous Roman finds, but also a massive bronze bracelet with overlapping stamp-shaped terminals (Fig. 5). The bracelet is round, in cross-section, and ends with stamp-shaped terminals decorated with an X-motif. There is a narrow ring-shaped expansion before the terminals. A complex decoration on the surface of the bracelet is preserved only in part. Next to the stamp-shaped terminals there are three groups of narrow and shallow transverse grooves; between the terminals there is a barely visible zigzag decoration consisting of three parallel narrow grooves in two fields/metopes. Also, the body of the bracelet between the last group of grooves is decorated with three longitudinal series of small and shallow circular depressions. External diameter: 8.0 cm; internal diameter: 5.8 cm; body thickness: 1.3 cm; diameter of the terminals: 1.0 cm.

The closest parallel for the bracelet from Orolik is the chance find of a bracelet from Erdut, an important Dalj group site. It also has a narrow

⁴⁹ Guštin & Teržan 1976, 192, map 2; Teržan 1976, 323–324, 344, 352–353, 375–377, fig. 18; Teržan 1998, 521, fig. 7; Blečić Kavur & Jašarević 2016, 226–227, fig. 3; Sóos 2020, 65–68, fig. 24; Sóos 2021, 45–48, fig. 3; II.

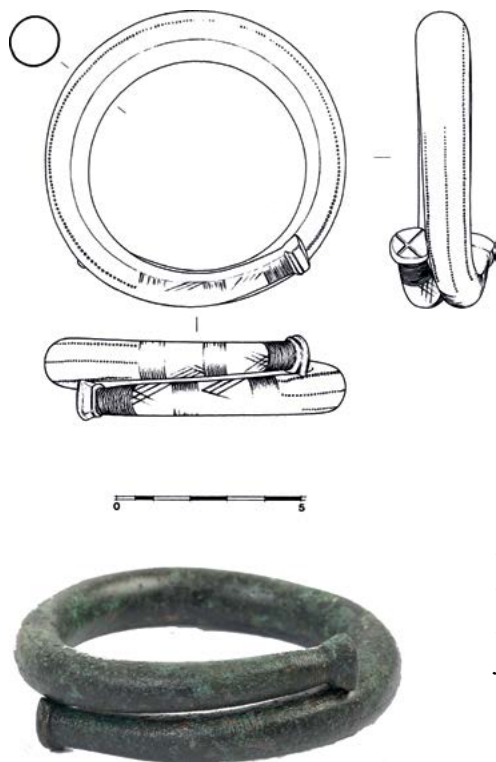


Fig. 5 Bracelet with stamp-shaped terminals from the Orolik–Rajterovo Brdo (Karaševo) site (drawing by: M. Rončević; photo by: H. Jambrek).

ring-shaped expansion before the stamp-shaped terminal, followed by three groups of narrow transverse grooves with two metopes between them, decorated with a zigzag decoration made of two narrow parallel grooves each (Fig. 6). Between the last group of grooves, the body is decorated with several longitudinal series of small circular depressions.⁵⁰ Both bracelets from the female inhumation grave in Hrtkovci in Syrmia are decorated in the same way, with three groups of narrow grooves and two metopes with zigzag grooves at both ends, before the stamp-shaped expansion (Fig. 7). The bracelets are round, in cross-section, and have overlapping terminals. Before the trapezoidal stamp-shaped terminals, decorated with an X-motif,⁵¹ there is a narrow ring-shaped expansion. Also, a series of tiny circular depressions can be seen between the last

⁵⁰ Vinski & Vinski-Gasparini 1962, 270, pl. IX/98; Dizdar 2020, 193.

⁵¹ Bracelets from sites in north-western Bulgaria have the same kind of decorations on their stamp-shaped terminals: Gergova 1987, 72–73, pl. 34/A142; 35/A151–A153.

Fig. 6 Bracelet with stamp-shaped terminals from Erdut (after: Vinski & Vinski-Gasparini 1962).

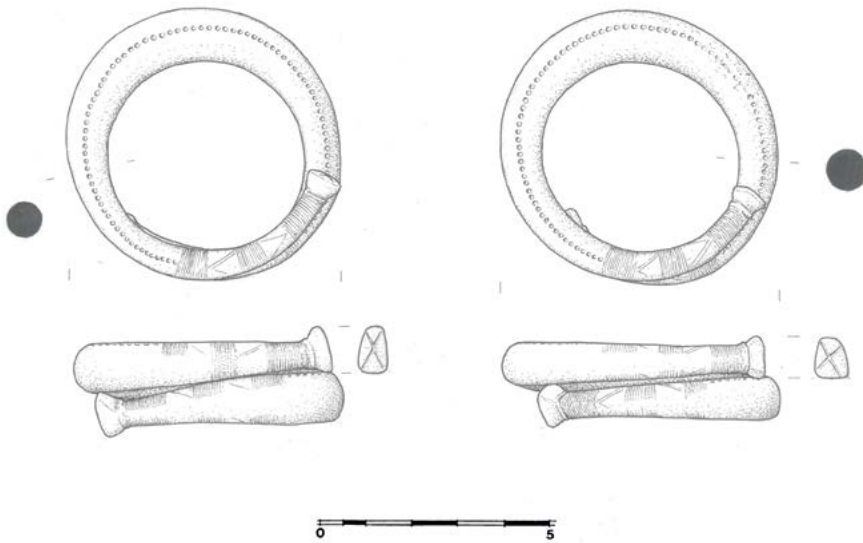
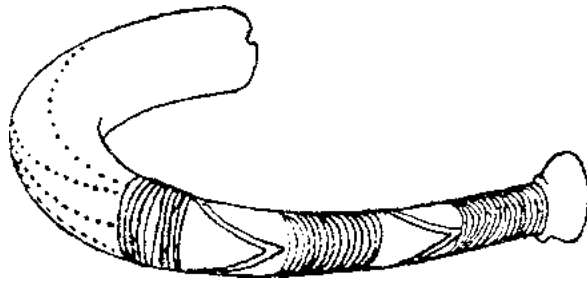


Fig. 7 Bracelets with stamp-shaped terminals from the grave in Hrtkovci (drawing: M. Galić; photo by: I. Krajcar).

groups of grooves at the top of the body of the bracelet. The grave included a pair of spirally twisted bracelets and a bronze open-work belt, dating the grave to the second half of the seventh and the beginning of the sixth century BC.⁵² This find, like a few finds from other cemeteries, indicates that massive cast bracelets with stamp-shaped overlapping terminals in preserved graves come in pairs.⁵³

A large number of bracelets with stamp-shaped terminals was found in the cemetery of Donja Dolina, and dated to Ha C2, but they are believed to originate from Glasinac,⁵⁴ which means they should be dated to phases 2a and 2b.⁵⁵ The way they were worn on forearms is evidenced by the pair of bracelets from the grave of N. Čegrlja 3a, which are also decorated with three groups of transverse grooves before the stamp-shaped terminals.⁵⁶ On the other hand, the pair of bracelets from grave 3 on the ridge of M. Petrović Jr have only one group of transverse grooves before the stamp-shaped terminals.⁵⁷ A pair of these bracelets were also found in graves 1 and 8 on ridge I of N. Šokić; their terminals are decorated with a wider group of transverse grooves.⁵⁸ Another bracelet is a stray find from the cemetery; it seems to be decorated with a group of grooves on one side, and with tiny depressions distributed in lines on the body.⁵⁹

R. Vasić dates bracelets with stamp-shaped terminals to horizon 2 of the Early Iron Age, equivalent to Ha C2, and also points out that they are often richly decorated by punching and incising.⁶⁰ These bracelets appear in women's graves that include other items of costume and jewellery in the Central Balkans. A bracelet from the Vrtište cemetery has two groups of transverse grooves; between them is a metope with an X-motif, its body decorated with several series of tiny circular depressions. Another bracelet is decorated with three groups of transverse grooves, while the metopes have double zigzag grooves, with two series of tiny circular de-

⁵² Vinski 1955, 35–36; Vinski & Vinski-Gasparini 1962, 270–271, 278, pl. VI/73–74; Vasić 1977, 18, 21, pl. 22A/3–4; Dizdar 2020, 193, fig. 3.

⁵³ Dizdar & Kapuran 2021, 194–195.

⁵⁴ Teržan 1974, 43, fig. 7.

⁵⁵ Čović 1987a, 241, 244, 246.

⁵⁶ Truhelka 1904, 85, pl. XL/7; Dizdar & Kapuran 2021, 194, fig. 2/7.

⁵⁷ Truhelka 1904, 90, pl. XLII/17–18; Dizdar & Kapuran 2021, 194, fig. 3/5.

⁵⁸ Truhelka 1904, III, 113, pl. LVIII/17, 19; LX/25.

⁵⁹ Marić 1964, pl. VI/17; Gavranović 2011b, 80, fig. 102/3.

⁶⁰ Vasić 1977, 21, 33; Vasić 1987a, 544; Vasić 1987b, 655, 661.

pressions that can be found on the rest of the body of the bracelet.⁶¹ One bracelet, from the site of Novo Selo–Dub, is decorated with a group of transverse grooves on the terminals.⁶² An inhumation grave from the site of Grivac contained two bracelets with two groups of transverse grooves on the terminals, with a metope with a double zigzag groove between them; the body is decorated with several series of tiny circular depressions.⁶³ The bracelets from grave 14 in tumulus III in Pilatovići have slightly narrower terminals, one of them decorated with a group of zigzag grooves followed by a group of transverse grooves.⁶⁴ Another two bracelets with an undecorated body come from the cemetery of Uzići.⁶⁵ A pair of decorated bracelets come from a destroyed grave at the site of Dvorovi near Bijeljina, with a visibly different body which is D-sectioned, while the terminals have a narrow stamp-shaped expansion.⁶⁶

These finds show that it is possible to distinguish several types of bronze bracelets with stamp-shaped terminals that display certain common characteristics, but also minor differences, especially in their decoration motifs. Also, it can be noticed that the bracelets with stamp-shaped terminals dated to Ha C2 are more massive and more richly decorated.

There are no such bracelets with stamp-shaped terminals in Glasinac, even though this area was considered as the origin of their concept. Bronze bracelets with overlapping terminals are on record as appearing from phase IVa and continuing into phase IVb, when they are usually decorated with incised and punctured motifs. These bracelets continue into phase IVc-1, when thicker bracelets appear along with the more gracious ones from the previous phase. Massive bracelets with overlapping terminals appear at that time too, preceding the very massive ones from the next phase, IVc-2,⁶⁷ when they do not appear so frequently anymore – usually in princely graves.⁶⁸ On the other hand, M. Gavranović believes that the origin of massive bronze bracelets of rounded cross-section can

⁶¹ Vasić 1977, 69, pl. 21/17–18; Vasić 1987b, 655, 661–662, fig. 37/14, pl. LXVIII/19.

⁶² Vasić 1977, 62, pl. 22B/2; Vasić 1987b, 655, 661, pl. LXIX/4.

⁶³ Vasić 1977, 56, pl. 23/5–6; Vasić 1987b, 655.

⁶⁴ Vasić 1977, 63, pl. 26/22–23.

⁶⁵ Vasić 1977, 68, pl. 28/5–6; Zotović 1985, 75, pl. XXII/12–13.

⁶⁶ Marić 1960, 49–50, pl. I/1–2.

⁶⁷ Čović 1987b, 583–584, 586, 611, 621, fig. 35/2–3; 36/15, pl. LX/5, 11; LXI/15, 18.

⁶⁸ I.e. Benac & Čović 1957, pl. XXXI/1–2; XXXXI/1; Srejski & Marković 1981, 72, pl. I/3–4.

be followed from the older phase of the Urnfield culture into the sixth century BC. The bracelets from Donja Dolina have been dated to the late eighth and the early seventh centuries BC, and represent a local form in terms of decoration. In the seventh century BC bracelets with stamp-shaped terminals appeared along with the older form of bracelets. The youngest bracelets are the oversized ones, which continue into the second half of the sixth century BC, still decorated in the older way – with series of impressed dots and transverse grooves.⁶⁹

A detailed classification of bronze bracelets with expanding, thickened or stamp-shaped terminals was made by D. Gergova. The bracelets have stamp-shaped terminals that overlap, rarely touching, and the terminals are usually decorated with groups of transverse lines. Having a round or D-shaped cross-section, they are dated from the second half of the seventh to the first half of the sixth century BC. The last variant of bracelets with stamp-shaped terminals are those that have conical expanded terminals, which are separated from the body by a small rib. The overlapping terminals are decorated with transverse grooves, while the middle part is decorated with dots in the manner of the bracelets from Orolik, Hrtkovci, Erdut, and so on. They have also been dated to the second half of the seventh and the first half of the sixth century BC.⁷⁰

Interesting finds of bracelets with stamp-shaped terminals come from the cemeteries of the Vekerzug group. A bracelet fragment from the Alsótelekes cemetery is decorated with a group of transverse grooves followed by a metope with an X-motif.⁷¹ Cremation grave 28 from the cemetery of Eger–Nagy Eged, where the cremated remains were inside two ceramic vessels, included a round-sectioned bronze bracelet decorated with two groups of transverse grooves, and a narrow stamp-shaped expansion at each end. The grave is dated to Ha D1 and included two more bronze bracelets.⁷² We should also mention the bracelet from the Zádiel site in eastern Slovakia, which has stamp-shaped terminals that are square in shape, and decorated with a fir branch motif along the edge. Before them are four groups of transverse grooves with X-motif metopes between them; the body is decorated with small connected circles be-

⁶⁹ Gavranović 2011a, 210–211, fig. 206–207.

⁷⁰ Gergova 1987, 72–73, pl. 34–35; Христов 2004, 58, fig. 15.

⁷¹ Kemenczei 2009, 163, pl. 136/21.

⁷² Kozubová & Horváth 2019, 140, 145, fig. 1/1.

tween the last groups of grooves.⁷³ These finds show that bracelets with stamp-shaped terminals rarely appear in the north-eastern Carpathian basin, where they probably arrived by means of cultural contacts from the Northern Balkans.

The known finds indicate that bronze bracelets with overlapping and stamp-shaped terminals, like open-work belts, are distributed from Macedonia to northern Serbia and north-western Bulgaria, and point to direct cultural contacts between these regions.⁷⁴ They have been recorded in smaller numbers at sites north of the Sava in Syrmia and eastern Slavonia; it is noticeable that they have not been found so far in the excavated Dalj group cemeteries, except for Erdut.⁷⁵ They are a characteristic item of female jewellery and have been found in graves that can be dated to the second half of the seventh and the beginning of the sixth century BC.

Conclusion

The boat-shaped fibulae and bracelet found at the site of Orolik–Rajterovo Brdo (Karaševo) in western Syrmia, possibly originating from destroyed graves, can be dated to the end of the seventh and the beginning of the sixth century BC, based on parallels. This would be equivalent to phase 2 of the Early Iron Age after R. Vasić,⁷⁶ which is the dating of the few finds from Syrmia,⁷⁷ with the grave from Hrtkovci standing out by its items of costume and jewellery.⁷⁸ On the other hand, it is the period of the youngest phase of the Dalj group,⁷⁹ characterised by various forms of boat-shaped fibulae known from the cemeteries of Batina and Dalj, where they have been dated to Ha C2 and the beginning of Ha D1.⁸⁰ The same dating applies to different forms of boat-shaped fibulae – from Lower Carniola, where they are characteristic for the Stična phase with a peak during the Stična 2 subphase,⁸¹ to horizon 2 of the Martijan-

⁷³ Mirošayová 2017, 9–10, fig. 3/5.

⁷⁴ Kilian 1973, 432; Kilian 1975, 62, 108, fig. 4/1, pl. 84/2; Parzinger 1992, 234, fig. 12/2.

⁷⁵ Dizdar & Kapuran 2021, 194–195.

⁷⁶ Васић 1971; Vasić 1977; Васић 1977–1978; Васић 1980 etc.

⁷⁷ Tasić 2007.

⁷⁸ Dizdar 2020, 190–192, fig. 3.

⁷⁹ *Ibid.* 190–192.

⁸⁰ Metzner-Nebelsick 2002, 419–422, 425, fig 184.

⁸¹ Gabrovec 1987, 48–49; Dular 2003, 118, 130.

ec-Kaptol group,⁸² and phase 2a–2b of the group of Donja Dolina–Sanski Most.⁸³

Boat-shaped fibulae from Orolik, and from other sites of the Dalj group in Baranya, eastern Slavonia, and western Syrmia, especially those with a rib in the middle of the bow, show cultural connectivity with western Pannonia.⁸⁴ On the other hand, the bracelet with stamp-shaped terminals points to cultural contacts with the northern parts of the Central Balkans,⁸⁵ just like the double-loop bow fibulae with a Boeotian shield foot, that were also found at Dalj group sites.⁸⁶ Regarding the finds from Orolik, if we assume that they come from destroyed graves, the question is whether these were cremation graves like those from the Dalj group cemeteries, or if they were inhumation graves characteristic of the Bosut group, especially its youngest phase described as the Syrmian group. Aside from a few chance finds, the area of Vinkovci has no explored sites from that period – either cemeteries or settlements. Since this area lies between the Sava and the Danube, it is not to be excluded that the area has biritual cemeteries dated to the second half of the seventh and the beginning of the sixth century BC, followed by the domination of inhumation burials.⁸⁷ Current insights show that this period in Syrmia and eastern Slavonia, regardless of their cultural dichotomy and the development of Dalj and Bosut groups, was marked by different communication networks. At this moment, the appearance of characteristic items of female costume and jewellery, like fibulae and bracelets, most clearly testifies to cultural transfers from neighbouring and distant regions, which led to the creation of unique and hybrid combinations of female costume.⁸⁸ Nevertheless, more accurate information regarding the material legacy in the area from Baranya to Syrmia during the second half of the seventh and the beginning of the sixth century BC certainly requires more finds like those from Orolik, especially from intact funerary assemblages.

⁸² Vinski-Gasparini 1987, 198; Teržan 1990, 101.

⁸³ Teržan 1974, 40, 42–43; Čović 1987a, 244, 248–249; Gavranović 2011a, 193–194, fig. 179; Dizdar & Kapuran 2021, 189–191.

⁸⁴ Teržan 1990, 99–101; Glunz 1997, 98; Metzner-Nebelsick 2002, 419–422; Tecco Hvala 2012, 216–217.

⁸⁵ Dizdar 2020, 193.

⁸⁶ Heilmann 2016, 12–19; Dizdar 2020, 198.

⁸⁷ Dizdar 2020, 190–193, 198–205.

⁸⁸ *Ibid.* 198.

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Attila M. Horváth*

Budapest History Museum

Department for Prehistory and Migration Period

Budapest, Hungary

Grave Disturbances, Posthumous Manipulations and Grave Robberies in the Celtic Cemetery of Csepel

Abstract: Between 2004 and 2008, the Prehistory and Migration Period Department of the Budapest History Museum carried out archaeological excavations at the northern point of Csepel Island, Budapest. As I have mentioned in several publications, the site has provided important finds from different periods. Among other things, a La Tène B–C period cemetery has been uncovered.

Key words: Csepel Island, Celts, grave disturbances

Between 2004 and 2008, the Department for Prehistory and Migration Period of the Budapest History Museum carried out archaeological excavations at the northern point of Csepel island, Budapest. (Fig 1.1–2) As mentioned in several publications, the site has provided important finds from different periods. Among other things, a La Tène B–C period cemetery has been uncovered (Fig 1.3).¹

Based on the rites of the graves and the grave goods, the cemetery can be divided into three periods. An Early: La Tène B; a transitional: La Tène B/C; and a classic C1 period. Most of the significant Celtic sites found previously around Budapest can be dated to the La Tène D period, and mostly between the first centuries BC and AD. The rarely occurring earlier Celtic finds were mostly indicated by stray finds.

* horvath.m.attila@gmail.com

¹ Horváth 2005, 177–185; Horváth 2016, 141–163; Horváth 2017, 53–67; Horváth 2019; Horváth, Endrődi & Maráz 2007, 216–232.



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Fig. 1.

1. The Budapest Central Wastewater Treatment Plant on the northern point of Csepel island
2. Location of the site on the map of the second military survey (1869)
3. The map of the La Tène cemetery.

More than 100 of the unearthed 900 stratigraphic units could be associated with the cemetery of the La Tène B–C period. The graves can be distinguished into inhumation and cremation burials, but there was also a variety of burial rites between the two main groups.

The orientation of the burial pits has been changed from time to time. They were mostly oriented from north to south, but north–west to south–east orientations were also common, and in some cases they were very varied. There were also differences in the way the bodies were buried. Both north–south and south–north orientations have been observed.

In the case of the cremation graves, there was also a great deal of diversity. The majority of the grave pits were typically large and rectangular, often with a perceivable wooden grave structure. On the other hand, there were also different grave shapes, such as the almost circular graves or, especially in the transitional La Tène B/C period, the smaller square-shaped graves.

Not only the burial rites, but also the chronology of the grave goods showed differences. The items recovered here were used between the La Tène A2 and C1 periods, but how and when they were placed in the graves is another question.

There was, however, one thing these burials had in common. Almost all of them had been disturbed. These disturbances could have been the result of a reburial, a grave robbery, or some kind of posthumous manipulation of the grave. They often involved not only the disturbance or theft of objects from the graves, but also the disappearance or significant commingling of the remains of the deceased.

The disturbance, possibly robbery or other manipulation of graves, is not an unknown concept in this period. Similar phenomena are well known from numerous sites in the Middle-European region, for example in Hungary, Slovakia, and Austria too.²

On the basis of the finds, it seems that the north–south oriented inhumations in the Csepel cemetery could be dated to the La Tène B period,³ while the south–north oriented inhumations could be dated to the La Tène B/C transition period, which is not at all typical for the Central European region.

It is even more interesting when we consider my observations that in the early and middle La Tène culture of Central Europe, the south–north orientation is dominant in inhumation burial rites. Moreover, there are some examples for changes in the orientation of inhumation burials to north–south just during the transition between La Tène B and C, found in cemeteries north of the Danube.⁴

² Like in Sajópetri: Szabó, Czajlik & Tankó 2018, 15; Dubnik: Bujna 1989, 293–295; Mannersdorf: Ramschl 2011, 31.

³ It may be interesting to note that, closest to us, this phenomenon occurs only in Moravia among the early La Tène graves.

⁴ Ramschl 2012, 185.

Of course, we can perceive differences, as in the case of several graves in Moravia⁵ and northern Italy, for example at Monte Bibele,⁶ where the grave orientation was mostly north–south. Although their use starts usually earlier than the cemetery in Csepel, most of them can be dated to the fifth to fourth century BC. Of course, south–north and east–west oriented graves could occur in these sites too, but the chronological differences in these cemeteries are not as pronounced as in Csepel.

Unfortunately it is not possible to analyse all the graves of the cemetery here, so I would like to illustrate the phenomena discussed above with just a few examples.

Male burials, La Tène B period

In grave no. 164, only fragments of the skull remain of the skeleton. Among the finds, two small spearheads, a sword, two knives, and a whetstone have survived, interestingly relatively *in situ*. On the other hand, a bronze bracelet, a Certosa-type bronze and a bird-headed iron fibula, two rings, a hair ring, and some small bronze rings were found in relative disarray around the upper body and skull (Fig. 2.1).

Interestingly, one of the two knives is almost identical in form and size to the knife found in cremation grave no. 62 at Belgrade–Karaburma, which the author dated in 1972 to the turn of the third and second centuries BC (Fig. 2.2).⁷ On the basis of more recent research, however, Miklós Szabó dates the Belgrade–Karaburma grave to the end of the fourth century BC, the La Tène B2 period.⁸ Based on a comparison of grave finds, including those from Csepel, the latter date seems to be more accurate.

In grave no. 397, the skeletal bones were relatively intact, with the only signs of disturbance observed around the ribs. Of the finds, only the warrior's two spearheads, a ceramic bottle – which is rare in early Csepel graves – and some iron fragments survived. However, these could be the remains of a sword chain and a shield, suggesting that the deceased warrior may have had both a sword and a shield (Fig. 2.3).

⁵ Čižmarová 2013.

⁶ Vitali 2003.

⁷ Todorović 1972, 26, 79; T22.6.

⁸ Szabó 1994, 52, 5. ábra.

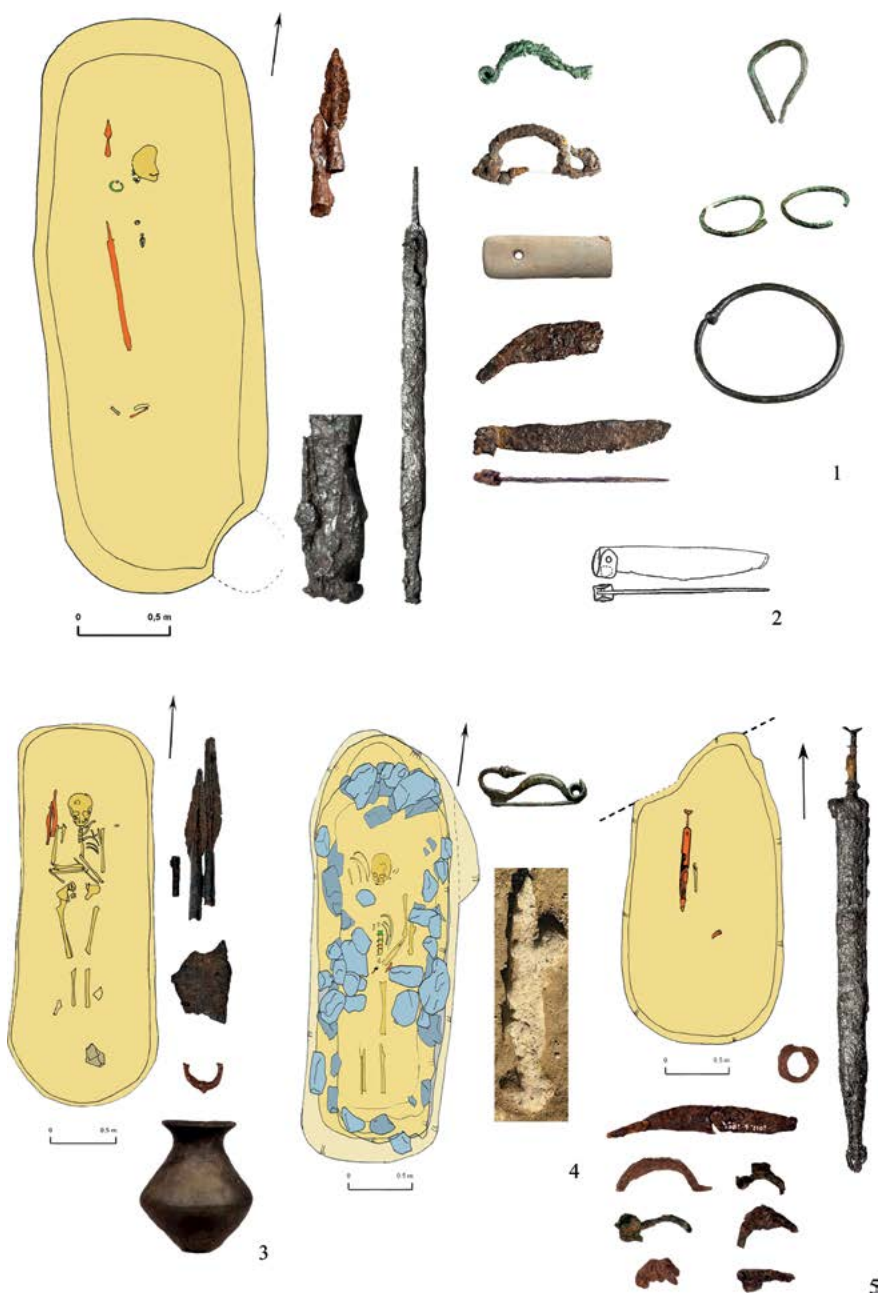


Fig. 2. Male burials of the La Tène B period.

1. Csepel – gr. no. 164 (92); 2. Iron knife from Beograd–Karaburma gr. no. 62. (after Todorović 1972); 3. Csepel – gr. no. 439; 4. Csepel – gr. no. 483.

The person buried in grave no. 439 was probably an important member of the Celtic community. He was buried in the only stone-packed grave in the cemetery, which may be significant, as Csepel island is actually a sandbank with no stones other than river pebbles. These limestones must have been transported from somewhere on the other side of the Danube, from the hills of Buda (Fig. 2.4).

However, the richness of the grave's inventory can only be imagined, as it was almost completely looted. Only a finely crafted bronze fibula with the La Tène A scheme, and heavily oxidised remains of an iron object of uncertain function were overlooked by the robbers. (Fig. 2.4) Nevertheless, the absence of skeletal bones suggests that there may have been a sword, possibly a spear, on the right side, and valuable finds on the right arm, chest, and neck.

In the case of grave no. 483, we have encountered a completely different situation. Although the skeleton in the previous grave was almost complete, only a single human forearm bone remained here. In addition, the only find was a straight sword of good quality, on which we were able to observe the remains of a wooden hilt. In addition, an iron ring (probably the remains of a sword chain), an iron knife, and six fragments of various iron fibulae were also found during the unearthing of the grave (Fig. 2.5).

Female burials, La Tène B period

The situation is apparently similar for female burials. In grave no. 160 (88), for example, there were almost no human bones left in the almost completely looted burial. Only a few scattered beads, a few teeth, and seven *in situ* bronze bracelets on forearm bones indicate that the grave was in fact an inhumation. The most significant find, however, is undoubtedly a pair of fibulae, which look like they are *in situ* but were in fact in a secondary position, found in the place of the missing upper body. In this case, a dragon-head fibula was found alongside the remains of a rare Altmann-type fibula connected with a bronze chain (Fig. 3.1).

Grave no. 274, based on its dimensions (length: 168 cm; width: 78 cm; depth: 20 cm), was probably a burial of a young girl, which was completely destroyed. There were no skeletal remains or calcined bones in the pit. A large quantity of beads (coral, glass, amphora-shaped, and amber) were found scattered in the soil of the northern half of the grave.

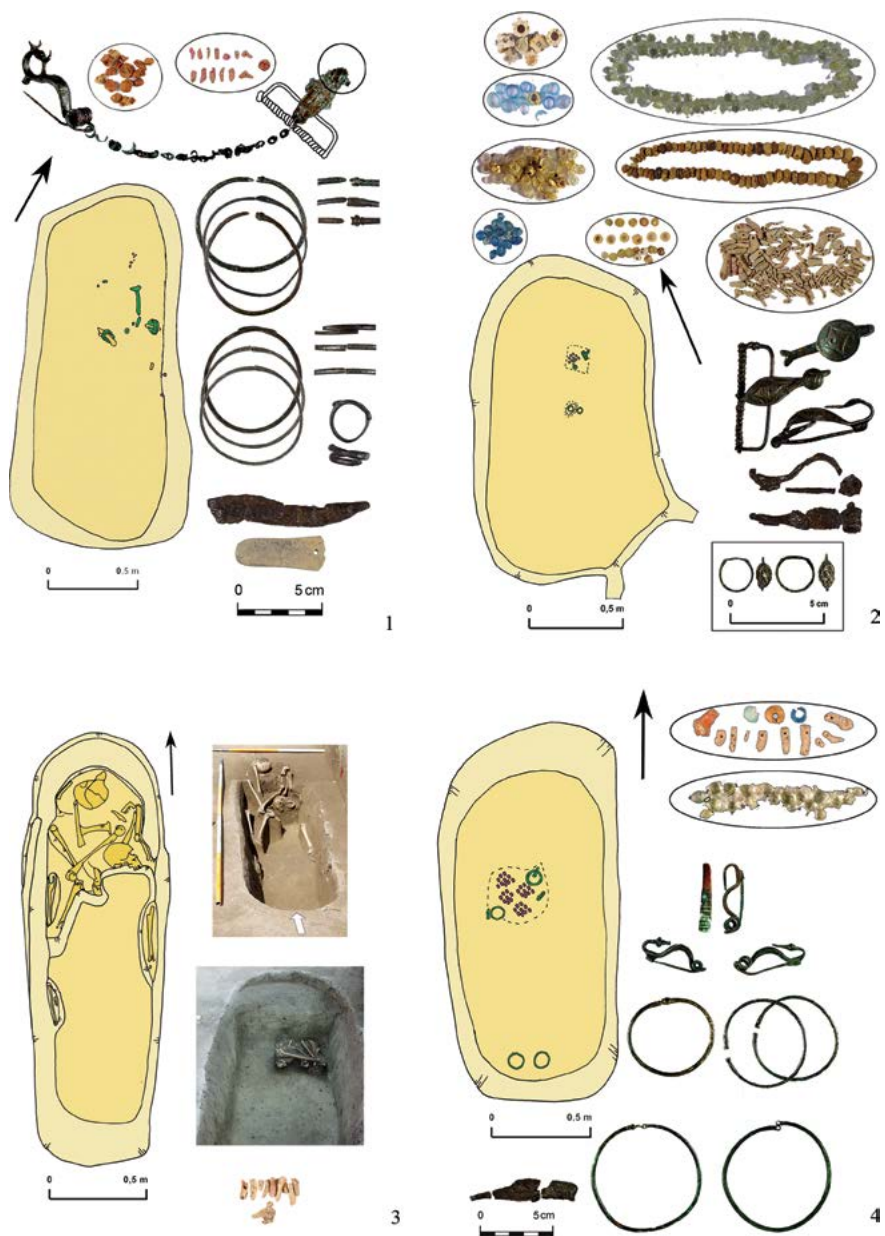


Fig. 3. Female burials of the La Tène B period.

1. Csepel – gr. no. 160/88; 2. Csepel – gr. no. 274; 3. Csepel – gr. no. 283;
4. Csepel – gr. no. 444.

The rest of the grave goods were found in an area of 35 by 25 centimetres at the bottom. Despite the high level of looting, an iron Certosa XIII fibula,⁹ and two bronze seal rings with waterfowl (perhaps herons) engraved on their surfaces were preserved. In addition, and perhaps somewhat surprisingly, one of the finest bronze fibulae of the entire assemblage was recovered here.¹⁰ The bird-shaped fibula ("Fußpaukenfibel") has a cross-bow-spring mechanism. Its surface is decorated with geometric patterns, and the recurved foot depicts a long-beaked waterfowl (Fig. 3.2).

The situation is slightly different in the case of the dual burial of grave no. 283. After the first burial, the grave was reopened and the bones of the deceased were arranged in a pile in the northern part of the grave pit. Of course, the grave of the newly buried person was disturbed several times, and the bones of the two deceased were almost completely disarranged. Only a few coral beads remain of the grave goods (Fig. 3.3).

In the case of grave no. 444, the situation is also different. The skeletal bones have been almost completely removed by posthumous manipulation. Only a few bone fragments remained between two small piles of finds in the centre of the grave. However, in contrast to the completely looted graves, two bracelets with fibulae, and the two anklets have been replaced almost in their anatomically correct positions (Fig. 3.4).

La Tène B2/C1 transition period burials

The new waves of Celtic migration that emerged in the late phase of La Tène B2, which closes the early phase of the La Tène period, can also be perceived in the changes in funerary rites, weaponry, and costume.

In the graves of the La Tène B2/C1 transition period, typical C1 period finds appear alongside those known from La Tène B2. The change in costume and the transitional character of the period is also visible in the grave goods. Ceramic grave goods became more common in the burials, but the various glass, coral, and amber beads, the stylised bird-headed fibulae, and the bronze anklets bent from thin wire disappeared. However, belts made of iron plates fastened with iron belt hooks, bronze necklaces, tubular (sheet) anklets, and fibulae with knotted feet are new elements of this period.

⁹ Teržan 1977, 339, Fig. 5/g. (variations of type XIII Certosa fibulae).

¹⁰ Horváth 2017, 56; Fig. 4.1.

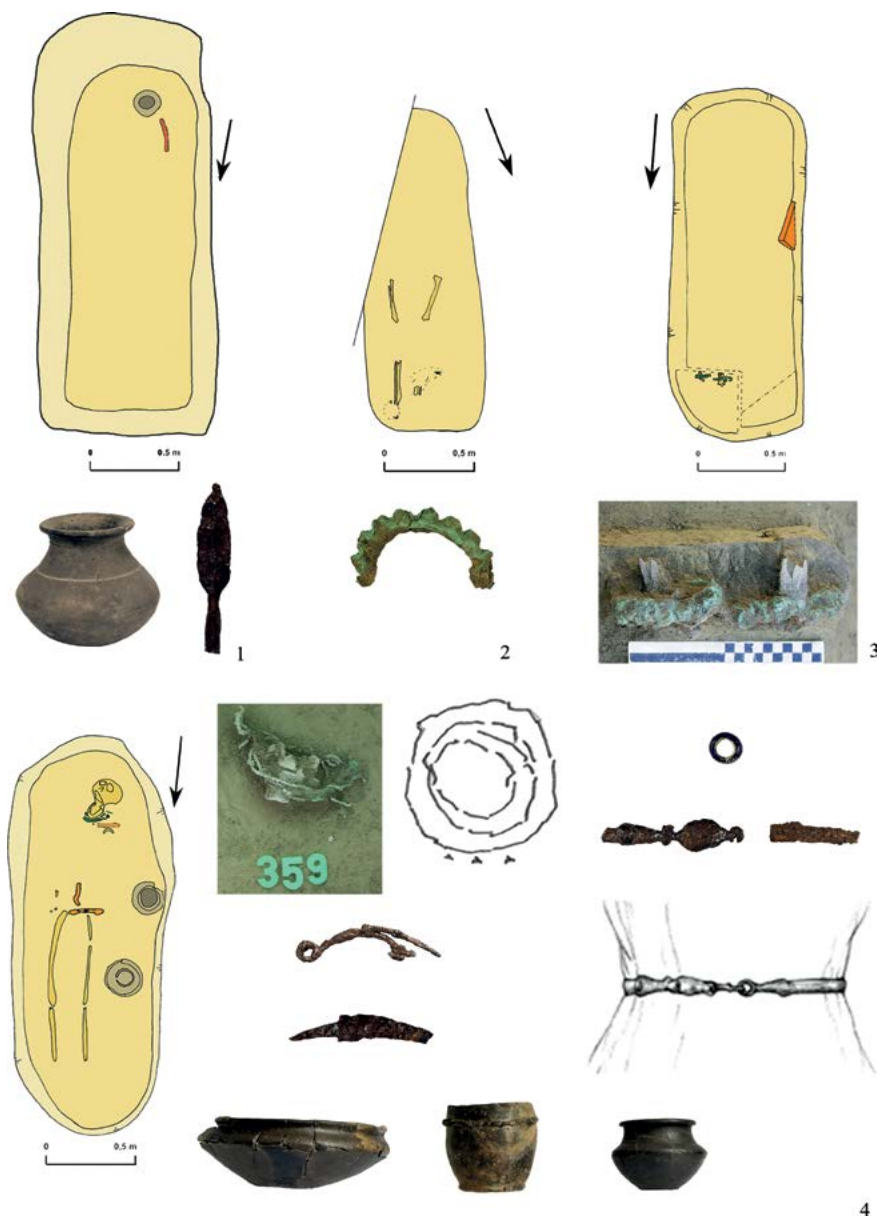


Fig. 4. Burials of the La Tène B2/C1 transition period.

1. Csepel – gr. no. 90 (18); 2. Csepel – gr. no. 432; 3. Csepel – gr. no. 674; 4. Csepel – gr. no. 359.

Inhumation burials used to be “strictly” north–south, but at a certain point they turned south–north. Cremation burials also appeared in this period, in the form of small square-shaped graves. The only thing that has not changed is the frequency of grave disturbances. Next to one or two seemingly intact skeletal graves, in most cases only a few finds indicate that the pit may once have been a grave.

In grave 90 (18), only a ceramic vessel and an iron object (an iron spearhead) indicated that it was probably a male burial (Fig. 4.1).

However, in graves no. 432 and 674, the presence of some human bones and the remains of some bronze anklets indicated that these could have been female graves (Fig. 4.2–3).

In another case, grave no. 359, the skeletal remains were in a rather poor state. The bones of the arms, the upper body, and even the vertebrae were missing. It is therefore reasonable to assume that this grave was also the victim of grave robbery. Three ceramic vessels, a fibula, and a knife were found in the grave. Around the neck of the deceased was a bronze necklace with at least three rows, with three axe-shaped lamellar pendants. Surprisingly, a single blue bead was found alongside the bronze links, but it was only one piece. I cannot rule out the possibility that it came from another grave that had been looted earlier. The clothes of the deceased were fastened with a new type of iron belt with lamellar plates and a belt hook.

It is much more difficult to detect robberies in cremation graves. It is usually impossible to know what was originally placed on the pyre, and whether all the artefacts were actually collected at the end of the ceremony (Fig. 4.4). Evidence of major disturbances can only be found in later La Tène C1 burials.

La Tène C1 period burials

After the La Tène B/C transition period, inhumation burials disappeared, and the nature of cremation burials changed. The small square pits were replaced by large rectangular tombs, in which the ashes of the deceased were scattered among the offerings of food and drink placed in the graves, and the remains of jewellery, weapons, and utensils collected from the pyres. In many cases an additional wooden structure was built over the graves, to provide a stable crypt roof, and often a vessel was placed on top, with the mouth downwards, as an additional offering (Fig. 5.1).



Fig. 5. Burials of the La Tène C1 period.
1. Csepel – gr. no. 122 (50); 2. Csepel – gr. no. 416.

In addition to the larger, apparently intact graves, a number of looted graves were excavated. But there have also been some cases where only a few broken pieces of pottery or only some ceramic vessels were left, apart from the ashes. Such graves were, for example, no. 416 and no. 368 (Fig. 5.2–3).

However, we have also found tombs that clearly showed the shape of the pit the robber had dug, and vessels that had been thrown back into the pit afterwards. In the case of grave no. 179, for example, we found a hand-formed pot on top of the robber's pit, as well as a piece of a small kantharos. The other half of the latter was found at the bottom of the grave, just above the ashes and jewellery that had been burnt on the funeral pyre (Fig. 5.4).

Stray finds

A number of stray finds were found in the area, apparently from the looted graves. For example, the finds from Stratigraphical Unit (S.U.) 468, an S-shaped bowl and a bronze bracelet with buffer ends (Fig. 6.1), or from the S.U. 469, where the remains of bronze bracelets and rings were found in an assemblage near the former surface (Fig 6.2).

A bronze fibula with a dragon's head, S.U. no. 435, and another broken bronze fibula, S.U. 440, were found in a similar situation, (Fig. 6.3; 5), as well as a Late Halstatt type hand-formed cup with a small protrusion on the handle, S.U. 451 (Fig. 6.4).

A much more interesting situation was observed during the excavation of S.U. 276 (Fig 6.6). This was a shallow oval pit, with a small circular nook in the centre. The first artefacts came to light during the initial deepening of the surface, and were treated as stray finds. During the deepening of the pit, a number of further artefacts were discovered in a secondary position inside the nook. We considered the idea that the pit was a cenotaph, but the human bone remains found among the pile ruled this out. It is much more likely that these items came from nearby graves, which were robbed shortly after the burial, and that these discarded items were hidden or reburied after the act of robbery.

The pit contained two eye beads, "Augenperlen", of a yellow and a blue base colour, various glass beads, and a relatively large quantity of coral and amphora-shaped beads. In addition to two thin bronze wire anklets, several fragments of plates with punched decoration, and three

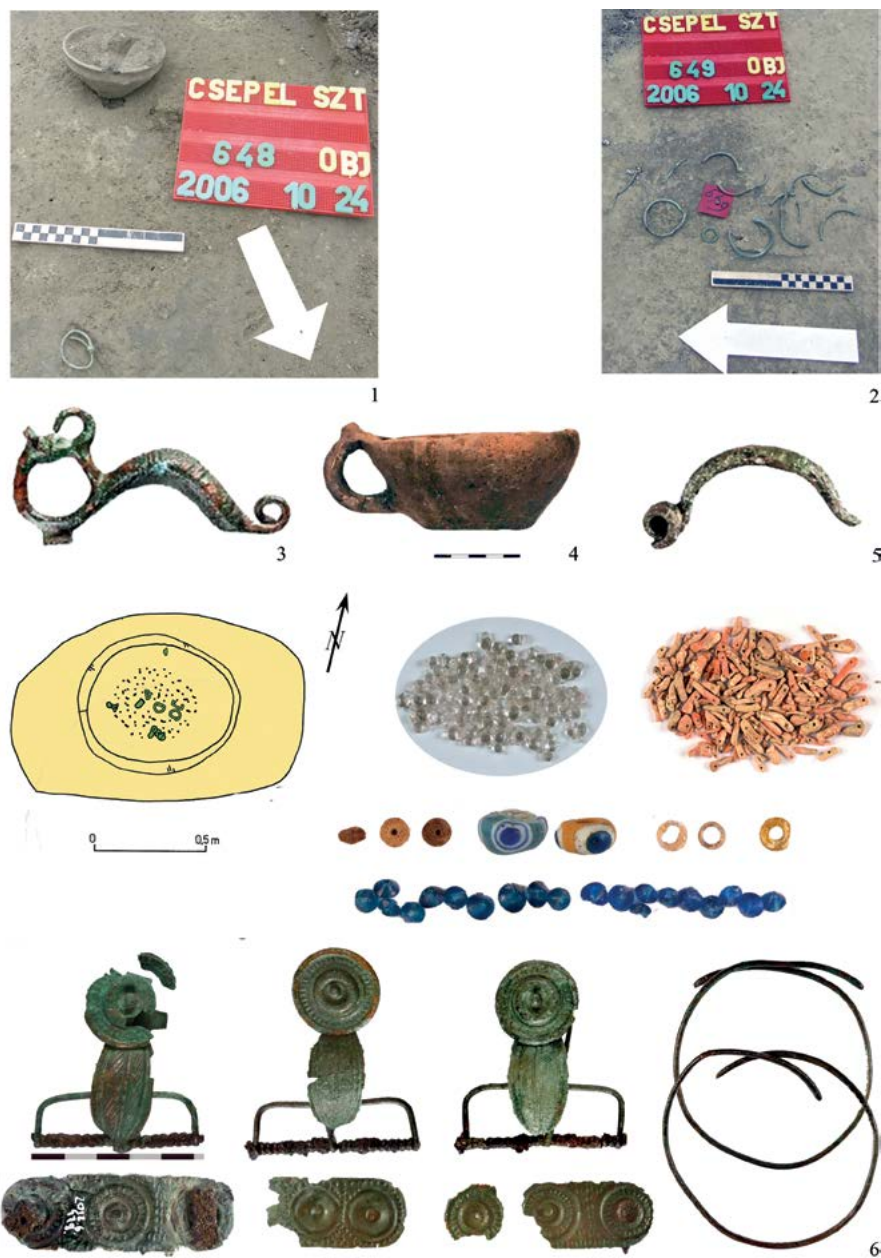


Fig. 6. 1-5. Stray finds from the territory 1. feature 468; 2.469; 3.435; 4.451; 5.440. 6. Secondary buried artefacts from feature 276.

bronze fibulae of the Altmark Kowalowice-type were recovered.¹¹ These fibulae, with their crossbow-spring mechanism, engraved on the bow and decorated with punched ornaments on the recurved discoid feet, are very close in form to the Hallstatt tradition, including the so-called “Fußzier-fibel” type.¹²

Questions and conclusions

To be honest, this is not the first time that we do not really know what was taken from a grave. And this raises the question of what the grave robbers were really after? However, unfortunately each question only raises new ones. Why were the artefacts removed from the graves if they were then scattered around the area, or why were the looted treasures re-buried in a separate pit?

As we have seen, despite the looting the burials excavated at Csepel have preserved a number of valuable artefacts. Some of these (including beads, signet rings, and various fibulae) may have been imported goods, and must have been treated as prestige items. Interestingly, however, these items seem to have lost their prestige by the time of the grave robberies. Could it be that these beautiful items are only important to us? The question of grave disturbances and posthumous manipulations has been investigated in more detail by Holger Wendling in the context of the Dürnberg bei Hallein cemeteries. In regard to the disturbance of graves, he considers the multiple burial ceremonies or the dispossession of cultic memories as a priority over a simple robbery. In contrast to the economic motivation, he emphasises the sacred and social nature of the disturbances, which in many cases were apparently socially accepted expropriations for the profane recovery of private or inherited property. According to some historical accounts, the property rights of the deceased often expired after a certain period of time.¹³

Various manipulations of the body, extraction of body parts or, in some cases, of the whole body, must be seen as a socially accepted intention, the reasons for which could be relic-cults (for example, the well-known Celtic skull-cult), the honouring of ancestors or, possibly, to prepare the area for a subsequent burial.

¹¹ Horváth 2019b, 53–54, fig. 11–13.

¹² Horváth 2019a, 112.

¹³ Wendling 2020, 162–164, 169.

Of course, the opening of stone-framed wooden chambers at Dürrenberg cannot be compared to the opening of flat graves at the Csepel cemetery, but it is clear that the intruders were fully aware of the position, gender, and arrangement of the graves and the deceased. In a number of cases, the robbing was limited to the deliberate removal of specific items, as in the case of grave no. 439 at Csepel (Fig. 2.4), where the only presumably valuable item (a bronze fibula) remained in the grave, and the limits of the disturbed area may indicate a search for the sword and belt fittings. A similar phenomenon was observed by Wendling in the case of grave 195 in the Dürrenberg Römersteig cemetery.¹⁴ However, while in the latter case it is assumed that the main purpose was to expropriate the cultic relics of the objects sought, in my opinion the local conditions at Csepel, such as the climate, soil conditions, and frequent changes in the groundwater level – which are much different from those at the the Dürrenberg site – make these items unfit for anything else than simply raw materials to be reused.

However, it makes us wonder what the real reasons for the disturbances in the Celtic cemetery at Csepel might have been. Some kind of cult activity or ritual performance, or perhaps some other social action as described above? Could the acquisition of valuable goods have played a role in our case? I think so – all variations seem plausible, but in some cases we must consider the materialistic implications of grave robbery.

In graves which, as I have mentioned earlier, had usually been carefully looted, there are many apparently valuable items left behind which the grave robbers ignored.

Some pieces and fragments of silver jewellery, such as a twisted earring from grave no. 391 (Fig 7.1), the remains of a silver spiral bead, and a hollow silver sheet bead, “Hohlblechperle”, from grave no. 389, with a punched decoration (Fig. 7.2), may help us to work out what the grave robbers took. The latter may have been a similar piece of jewellery to the necklace found in grave 54 at Pottenbrunn, Austria¹⁵ (Fig. 7.3). However, the finds from grave 538 at Csepel are the most reliable. In the apparently undisturbed grave, a torque of twisted solid silver wire was preserved around the neck of the deceased (Fig. 7.4).

¹⁴ Wendling 2020, 162, 165.

¹⁵ Ramsel 2010, 250. Abb. 10.

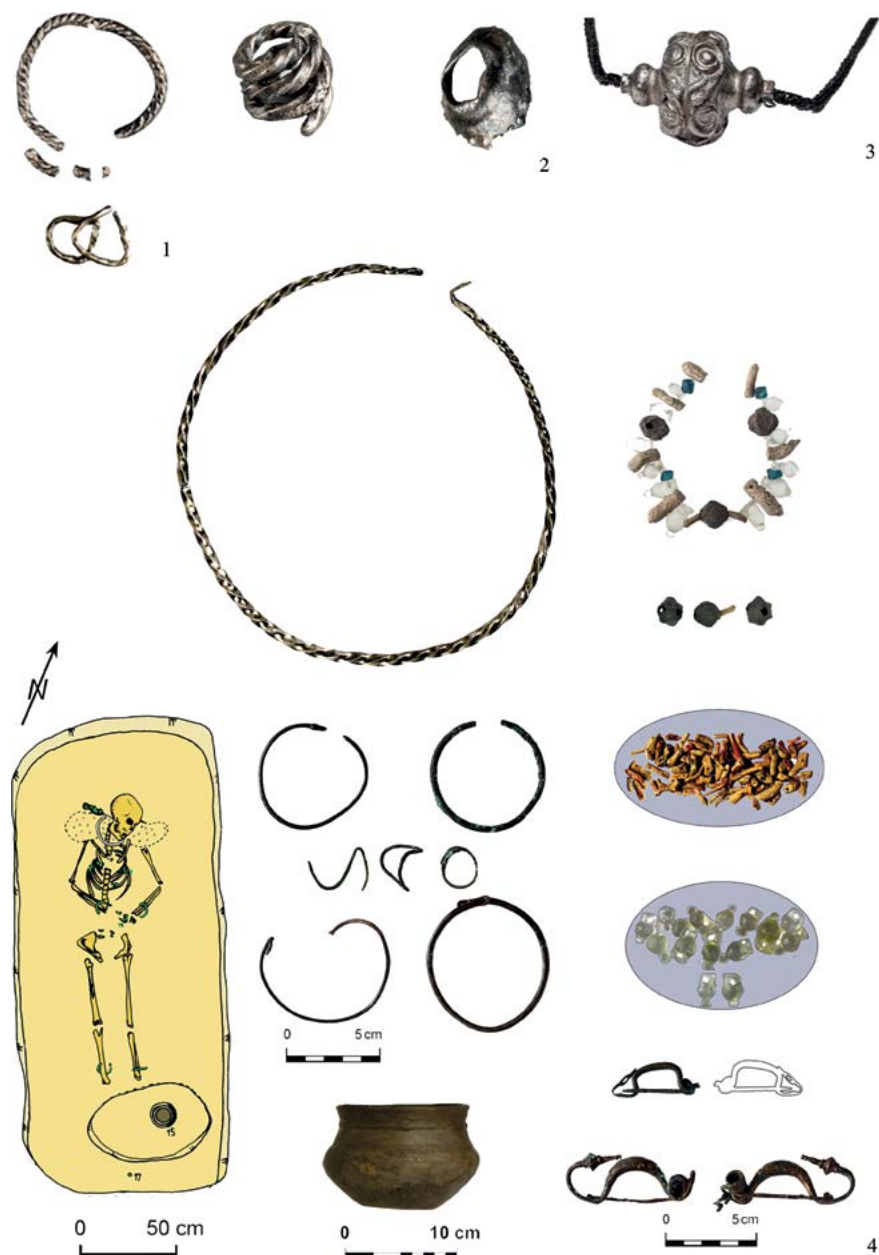


Fig. 7. 1-2. Csepel – gr. no. 391; 389; 3. Pottenbrunn gr. 54, (after Ramszl 2010); Csepel – gr. no. 538.

Considering that a similar piece of gold was found in a nearby cemetery in Kosd (Pest county),¹⁶ I think we are one step closer to answering our questions. It is apparent by these above mentioned findings that the Celts of these periods were in possession of various precious metals, while at the same time none were found in the majority of the graves we have listed. While we may attribute material value to the intricate fibulae or the carefully crafted beads today, as imported goods were hard to come by back at those times, we ought to exercise caution when assuming that they held the same kind of value back then. Seeing the grave goods in the cemetery together, the practices that we can observe suggest that, while both kinds of find held some kind of value to the people, they have been much different than what we attribute to them today.

The fact that many of the fibulae, beads, and chains remained in the clearly robbed graves, however in a secondary position, indicates that these were valuable on a much more personal or ritualistic level as the deceased's private belongings, carefully placed back in the grave after the materialistic items were removed. The answer, like many times, lies in the details not clearly apparent but missing, and what is missing from these graves are gold and silver – the precious metals.

¹⁶ Szabó 1999, 107, 109. Abb. 61.

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Viktor Lilčić Adams*

Antonio Jakimovski

*Faculty of Philosophy, Ss. Cyril and Methodius University
Skopje, North Macedonia*

New archaeological moments about the location of the ancient city of Bylazora

Abstract: Two historical sources, dating from antiquity, represent the memory of the ancient city of Bylazora. Those are the texts of Polybius and Titus Livius. Polybius describes the key role of the city and its territory, as a favourable zone for the incursions of the Dardanians into Macedonia. On the other hand, T. Livy states that the Macedonian king Perseus in 168 invited the Bastarnae to come to Bylazora for negotiations about their involvement in the war against Rome.

Key words: Location of Bylazora, Polybius, Titus Livius, Archaeological Evidence

Two historical sources, dating from Antiquity, represent the memory of the ancient city of Bylazora. Those are the texts of Polybius and Titus Livius. Polybius describes the key role of the city and its territory as a favourable zone for the incursions of the Dardanians into Macedonia.¹ On the other hand, Livy states that the Macedonian king Perseus in 168 invited the Bastarnae to come to Bylazora for negotiations about their involvement in the war against Rome.

However, in modern investigations, there are mainly two hypotheses about the location of the city of Bylazora.

1. According to the first one, laid out by Professor Fanula Papazoglu, the city of Bylazora is located at Kale–Veles.²

* viktorlilcic@gmail.com

¹ Within this paper, we used the translation of Polybius from the pen of M. Ritzl, 1988.

² Papazoglou 1988, 308–311.

2. According to the second hypothesis, proposed by Professor Ivan Mikulčić, the city of Bylazora is located at the site of Gradište–Knežje, close to Sveti Nikole.³

For her conclusions, F. Papazoglu relied on both historical sources mentioned earlier, particularly on the description of Polybius, who highlighted the circumstances due to which the Macedonian king Philip V was motivated to conquer the city of Bylazora:

*At the same time, King Philip conquered Bylazora, the largest city in Paeonia, very conveniently located for incursions from Dardania into Macedonia. With his conquest, he almost got rid of the Dardanian danger, because the Dardanians could no longer invade Macedonia so easily, since Philip conquered the mentioned city, and with it the approaches to Macedonia.*⁴

F. Papazoglu also pointed to the data of Livy, according to which the Macedonian king Perseus in 168 called the Gallic troops of Bastarnae, led by Clondicus, to come to Bylazora.⁵

According to Livy:

*[5] When they approached, Perseus went to meet them from his camp at the Elpeüs with half of his forces and began to give orders throughout the villages and cities near the road to bring out provisions so that there would be plenty of grain, wine, and animals. [6] He himself brought horses, breast-ornaments, and capes as presents for the chief men, and a small amount of gold to distribute among a few, supposing that the rank and file could be led along by expectations. [7] He reached the city of Almanæ and pitched camp on the banks of the Axius River. The force of Gauls halted near Desudaba in Maedica, waiting for their promised pay. [8] Thither Perseus sent Antigonus, one of the wearers of the purple, to order the rank and file of the Gauls to shift camp to Bylazora (this is a place in Paeonia) and the leaders to come in a body to him. The Gauls were seventy-five miles from the Axius River and the king's camp.*⁶

³ Микулчић 1976, 149–164, figs. 1–13.

⁴ Polyb. 5.97.

⁵ Liv. 44.26.7: [...]qui iuberet, multitudinem Gallorum ad Bylazora – Paeoniae is locus est – castra movere, principes ad se venire frequentes. Septuaginta quinque milia ab Axio flumine et castris regis aberrant[...]

⁶ Liv. 44.26.

On the other hand, I. Mikulčić compared the perimeters of the city of Veleško Kale–Veles (about 3.5 ha *intra muros* + open suburb on the eastern slope, in total 8 ha), with the city of Gradište–Knežje. To this calculation he added the areas of the surrounding open suburbs (20 ha according to him). If we look in detail, then the Paeonian city of Gradište–Knežje was structured by an acropolis: 1.4 ha; suburb: 1.94 ha; lower city: 4.5 ha; or a total of 7.84 ha of area *intra muros*. Mikulčić compared the surface remains of pottery and other elements, as well. Finally, he described the passages north of Ovčepole towards the regions of Skopje and Kumanovo, and decided that the site of Gradište–Knežje is the place where the Paeonian city of Bylazora was located.

Since the last article produced by F. Papazoglu on the problem of Bylazora, published in 1988, three and a half decades have passed, while I. Mikulčić produced his article on Bylazora some 24 years ago. In the meantime, our intensive research in the region around Veles, in the south-eastern regions of the Skopje basin, in the area of Ovčepole, as well as at the site of Kale–Veles and its surroundings, brought to light completely new archaeological moments, which obviously construct a new picture in resolving the ubication of the city of Bylazora.

1. Polybius and the Approaches to Macedonia

First of all, we will concentrate our attention on Polybius' approaches to Macedonia, through which the Dardanians invaded Macedonia easily.

I. Mikulčić points to six crossings that led from the Skopje region to the regions of Veles and Sveti Nikole:⁷

1. Bader – Kožle – Sopot
2. Katlanovo – Brezitsa – Otovitsa
3. Katlanovo – Gradmanci – Gjurište / Trstenik, and Mamutčevo
4. Gorno Konjare – Sušitsa – Preot crossing – Malino – Trstenik
5. Vakv – Dlga – Živinje
6. Dobrošane – Orašets – Gradište – Pezovo – Kampur – Kokošinje crossing

At this point in time, without entering deeper into analyses of the terrain and the latest knowledge about these routes and localities, we will

⁷ Микулчиќ 1976, 153–156, map fig. 1, showing the northern part of Paeonia with the border crossings.

present the following archaeological moments in the context of the transition from the Skopje basin to the region of Veles, and from the valley of Pčinja and the Kumanovo region to the region of Sveti Nikole.

In the area north of Sveti Nikole no fortifications with characteristic Antigonid cultural horizons have been registered. Out of the archaeological material, only one coin of Perseus was discovered at the Poza Rid site, Malino village. It is a site located in direction no. 4, from the small ancient town of Gradište–Gorno Konjare on the river Pčinja. Here, we have to mention that I. Mikulčić did not know the land route from Dobrošane via Orašets – Kolitsko (controlled by the dominant castell Ostravitsa) – Alakintse.⁸

It is obvious that the incursions of the Dardanians, from the Skopje basin in Paeonia (fourth and third centuries BC), later in the Macedonian Paeonia strategy (from 217 BC and through the next two centuries BC), led directly along the Vardar river. It is obvious that the region of Veles was the first on the line of the Dardanian incursions.

According to the article published by I. Mikulčić, it seems that he had some knowledge of the road that led along the eastern bank of the Axios, on the line from the village of Bader, along the river Pčinja and its estuary in the Vardar, then along the Vardar, through Sopot, to Otovičko Kale–Bašino Selo. However, later V. Lilčić Adams and his archaeological team discovered the completely unknown western highway.⁹ It becomes obvious that Polybius pointed exactly to these two approaches that led along the left and right banks of the Vardar river.

Let us look, briefly, at the fortifications along both banks of the Axios, between the regions of Skopje and Veles.

Western Vardar road I

The Western Vardar road (W.R. I on the map) led in the direction from the ancient Agrianian city of **Isar, Studeničani** in Skopje (No. 10 on the map),¹⁰ through the areas of the villages of: Zelenikovo – Dobrinovo – Karabunište – Slp – Beleštevitsa – Raštani – Prevalets – Kale–Veles.

⁸ There is some information that coins from the time of Philip V and Perseus were supposedly discovered at the castle Gradište–Alakintse, however, during our research we discovered only late Roman coins from between the fourth and sixth centuries AD.

⁹ Лилчиќ Адамс 2022, 317–320; Treneski 2025.

¹⁰ Lilčić Adams 2019, 147–152.

In the roadside fortification of **Gradište, Dobrino Selo** (No. 9 on the map), we discovered a large number of coins, out of which, for the purpose of this paper, we will mention those related to our topic, namely those minted by the Macedonian kings Antigonos Gonatas, Philip V, and by the cities of Amphipolis, Pella, Thessalonica, and Autonomous Macedonia (Fig. 2–7).¹¹

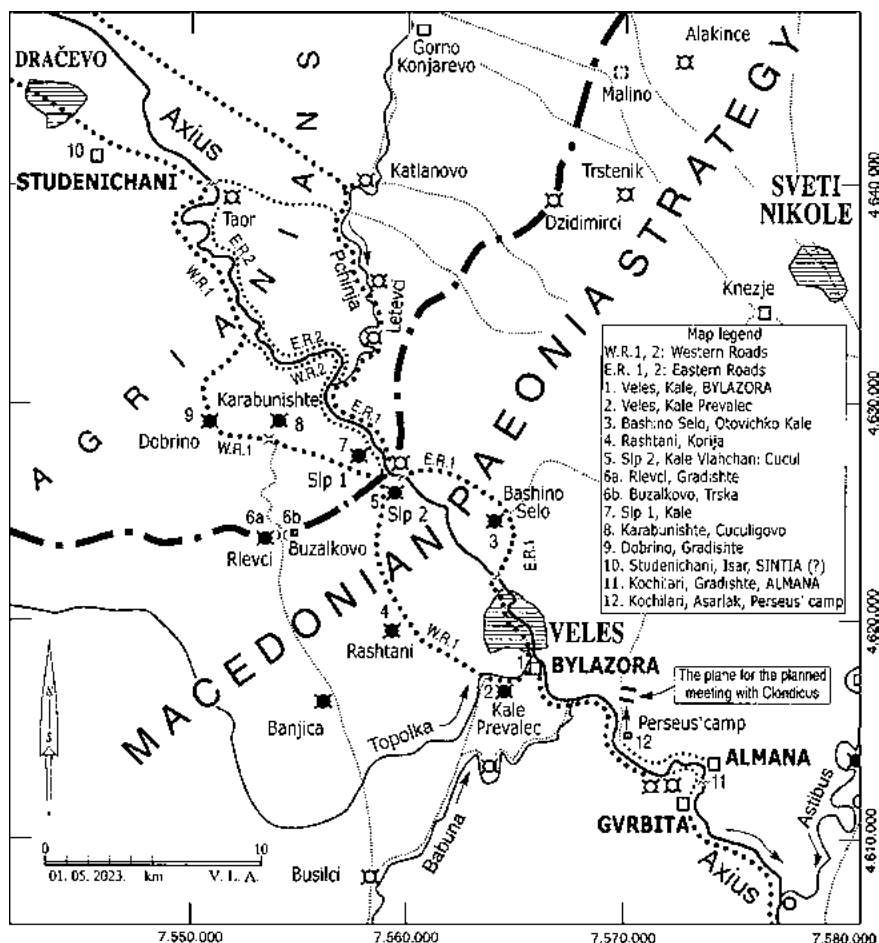


Fig 1 Map of the Vardar / Axios river valley between the regions of Veles and Skopje with cities and fortresses in the context of the problem of the location of the city of Bylazora.

¹¹ Lilčić Adams. 2019, 217–219.

Fig 2 Dobrino, Gradište, plan.

Fig 3 Dobrino, Gradište, view from the north-east.

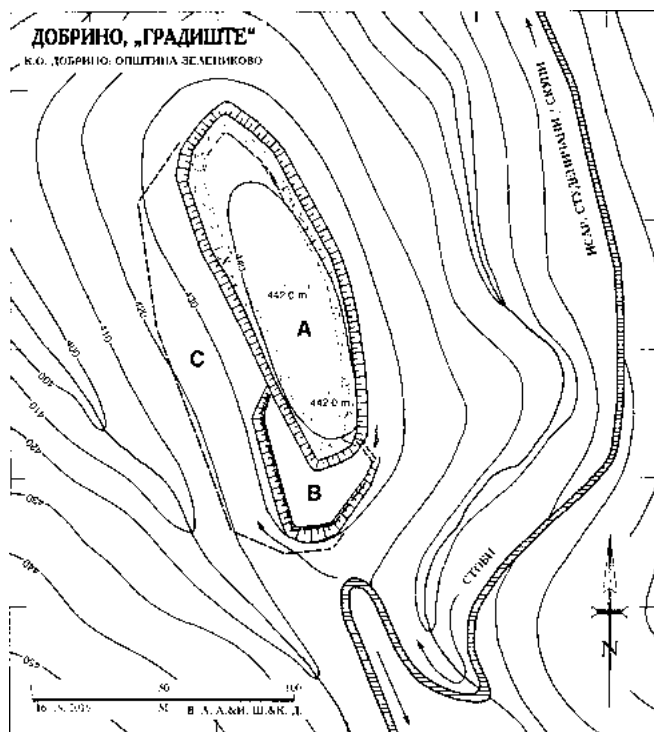




Fig 4 Remains of Western Road 1 near the village of Dobrino.



Fig 5 Dobrino, Gradište, bronze coin of Philip V.



Fig 6 Dobrino, Gradište, bronze coin of Philip V.

Fig 7 Dobrino,
Gradište, bronze
coin of Philip V.



In the fortification of the **Tsutsuligovo** site, near the village of **Karabunište** (No. 8 on the map), a coin of King Perseus was discovered (Fig. 8–11).

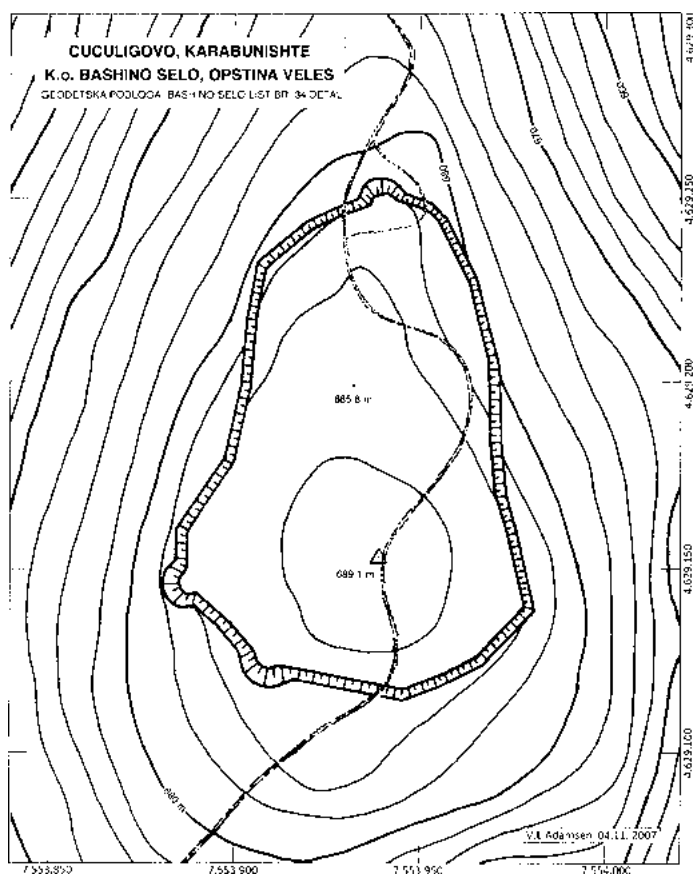


Fig 8
Karabunište,
Tsutsuligovo,
plan.



Fig 9 Karabunište, Tsutsuligovo, view from the north-east.



Fig 10 Karabunište, Tsutsuligovo, bronze coin of Perseus.



Fig 11 Karabunište, Tsutsuligovo, iron ax – labrys, early Antiquity.

In the fortification of **Kale**, near the village of **Slp** (No. 7 on the map), eight coins were discovered, out of which four were minted by Perseus, one very worn coin with the contours of a helmet on the reverse (probably Demetrius I or II, here in secondary use), and three late Roman small bronzes from the fourth century AD. Coins of Perseus and one coin of Thessalonica minted under Roman rule are also known from earlier research (Fig. 12–18).

Fig 12 Slp,
Kale, plan.

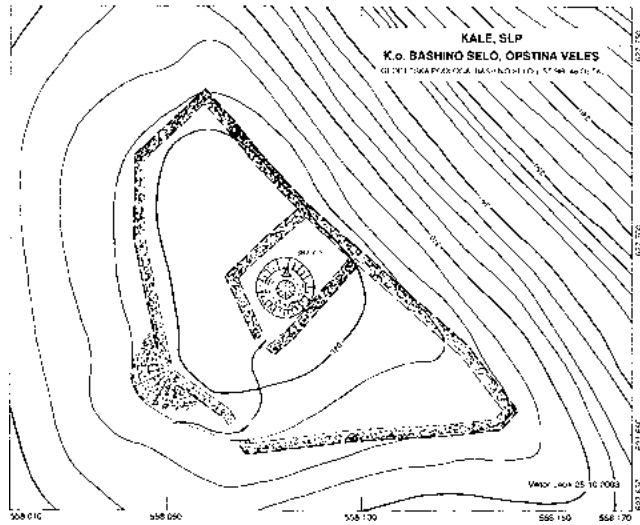


Fig 13 Slp, Kale,
view from the
south-east.





Fig 14 Slp, Kale, iron arrowhead of an Antigonid soldier.



Fig 15 Slp, Kale, bronze coin of Perseus.



Fig 16 Slp, Kale, bronze coin of Perseus.



Fig 17 Slp, Kale, bronze coin of Perseus.



Fig 18 Slp, Kale, bronze coin of Perseus.

In the small fortification of the **Kale Vlahčani Kukul**, located east-south-east of the village of **Slp** (No. 5 on the map), nine coins were discovered, out of which six from the city of Pella, one coin from the city of Thessalonica, one coin of Autonomous Macedonia, and one coin was a suberat of Dyrrhachium (Fig. 19–25).

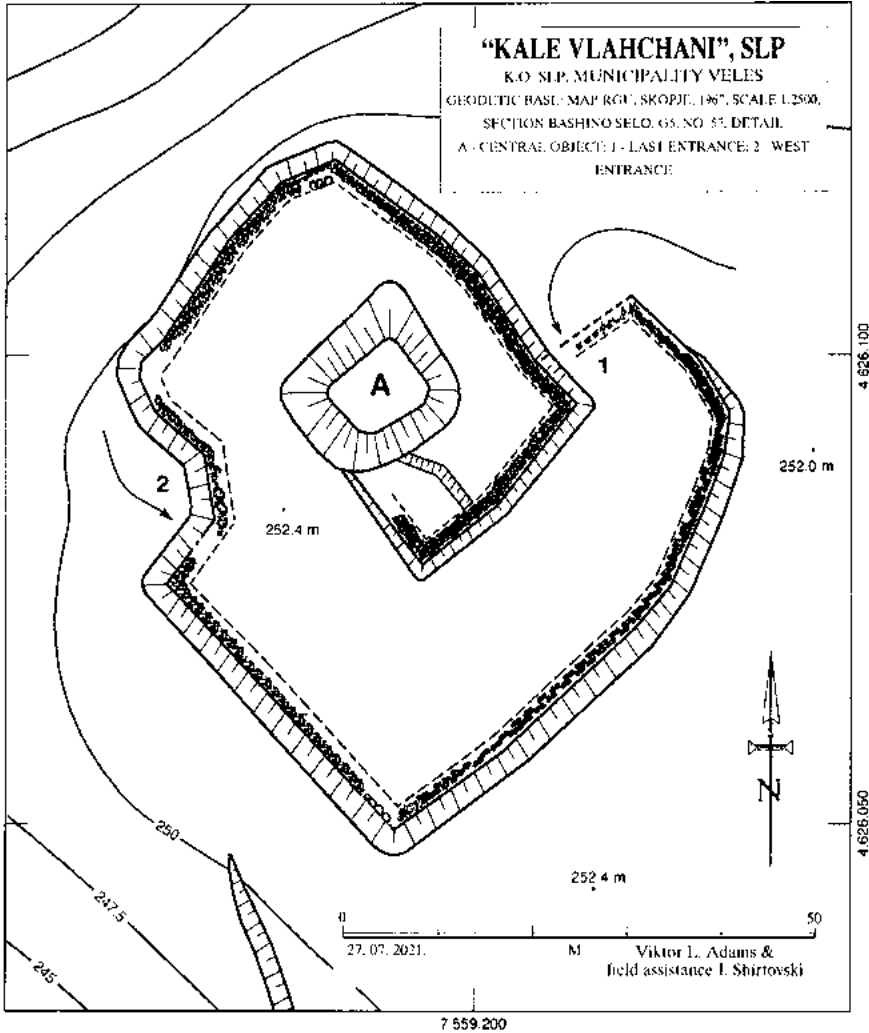


Fig 19 Slp, Kale Vlahčani Kukul, plan.

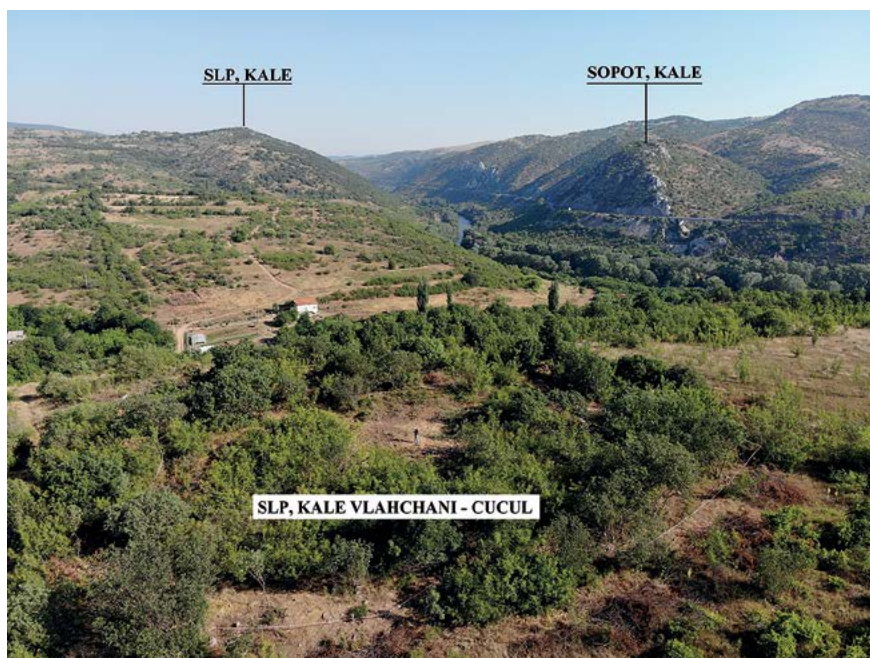


Fig 20 Slp, Kale Vlahčani Kukul, aerial view, with a view of the fortresses: Slp, Kale, and Sopot, Kale on the horizon.



Fig 21 Slp, Kale Vlahčani Kukul, part of a terracotta Megarian bowl.

Fig 22 Slp, Kale
Vlahčani Kukul,
bronze coin of
Pella.



Fig 23 Slp, Kale
Vlahčani Kukul,
bronze coin of
Pella.



Fig 24 Slp, Kale
Vlahčani Kukul,
bronze coin of
Thessalonica.



Fig 25 Slp, Kale
Vlahčani Kukul,
bronze coin of
Autonomous
Macedonia.



A military–strategic base was formed by the Macedonian king Philip V in the acropolis of a local Paeonian town, in the site of **Korija, village of Raštani** (No. 4 on the map). During the research of this locality, a total of 69 coins were discovered, out of which: five of Philip V, 12 of Perseus, 17 of Pella, five of Thessalonica, six of Amphipolis, five of Gaius Tamius Publilius, one of Autonomous Macedonia. Coins of Valentinian, of the Serbian king Uroš, and three Turkish coins were discovered at this site, as well (Fig. 26–34).

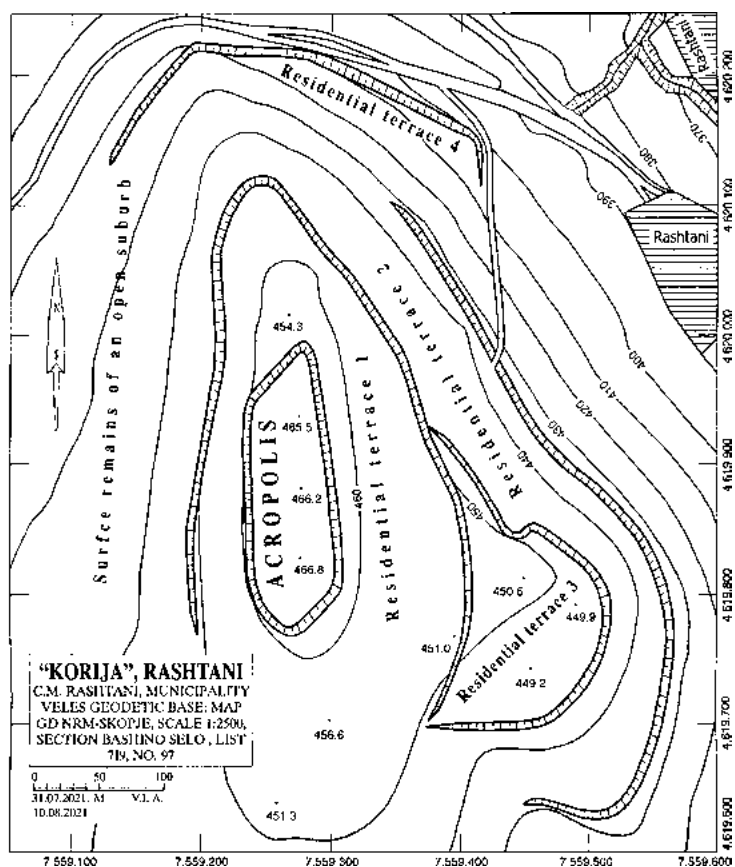


Fig 26 Raštani, Korija, plan.



Fig 27 Raštani, Korija, view from the west.

Fig 28 Raštani,
Korija, bronze coin
of Philip V.



Fig 29 Raštani,
Korija, bronze coin
of Philip V.



Fig 30 Rashtani,
Korija, bronze coin of
Philip V.





Fig 31 Raštani,
Korija, bronze coin
of Philip V.



Fig 32 Raštani,
Korija, bronze coin
of Philip V.



Fig 33 Raštani,
Korija, bronze coin
of Perseus.



Fig 34 Raštani,
Korija, bronze coin
of Perseus.

The Western road, from Korija–Raštani, led to Prevalets, a south-western suburb of the modern city of Veles. At that point, it entered the narrow gorge of the Topolka river, and after about three kilometers it entered the ancient city situated on the site of Kale–Veles. The entrance to the gorge was protected by the castle **Kale Prevalets–Veles** (No. 2 on the map). On this dominant plateau there are the remains of what once was a powerful fortress of the local inhabitants in the Archaic period. However, the fortress was also particularly significant for Philip V. Namely, he had stationed a military crew with the task of visual communication between the city of Kale–Veles, and Philip's next strategic base at the site of Korija–Raštani. At Kale–Prevalets we found a bronze coin of Philip V (Heracles / Harpa in an oak wreath), as well as a quadrunx of the city of Luceria from Apulia, dated 211–200 BC, with the following representations: quiver of arrows, club, bow, and legend LOYCERI (Fig. 35–40).

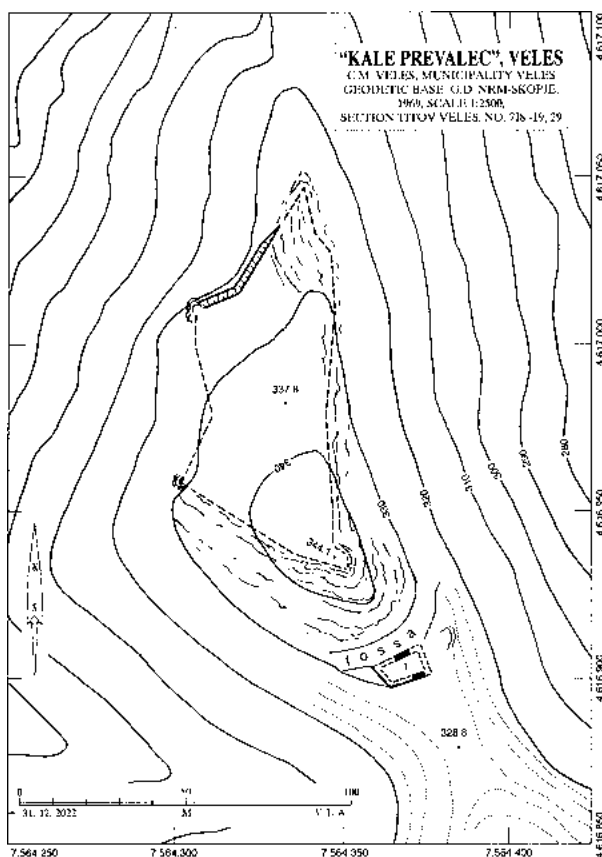


Fig 35 Veles, Kale Prevalets, plan.



Fig 36 Veles, Kale Prevalets, view from Kale Veles.



Fig 37 Veles,
Kale Prevalets,
bronze umbo of
shield, Archaic
period 6th
century BC.

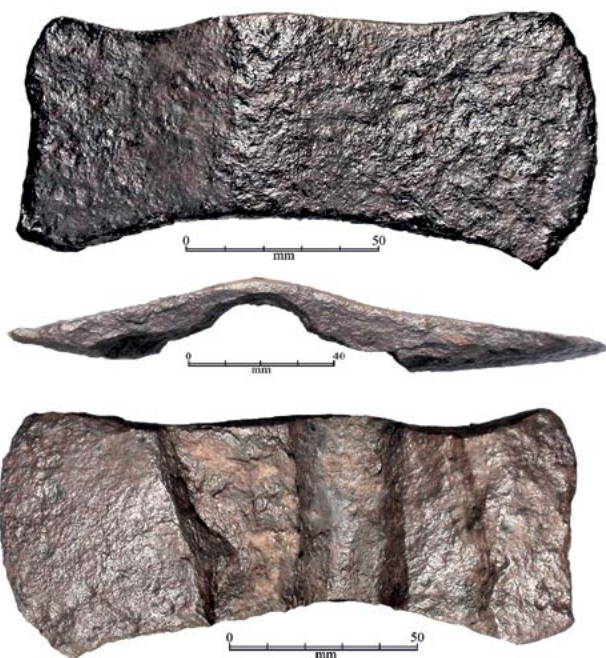


Fig 38 Veles, Kale Prevalec, iron ax – labrys.



Fig 39 Veles, Kale Prevalets, bronze coin of Philip V.



Fig 40 Veles, Kale Prevalets, bronze coin of Louceria, Apulia (Italy).

In the context of Philip's blockade of the Western road highway, there is also the road branch that led to Pelagonia. This road led from the Petrov Grob passage, (which was controlled by the fortress of Tsutsuligovo–Karabunište), to the south, through the Durmiševets mountain pass, to the Antigonid castle Glaučitsa–Banjitsa, then to the Babuna river and further to Pelagonia.

The Durmiševets mountain passage was protected by the military contingents of Philip V and Perseus, who were stationed in the fortress on **Gradište hill**, **Rlevtsi village** (No. 6 a on the map, Fig. 41–42), which rises west of the passage. But an Antigonid camp was also formed on the hill of **Trska–Buzalkovo** (No. 6 b on the map), which is located about 500 meters south-east of the Durmiševets passage. Next to the military camp of Trska–Buzalkovo there are the remains of a small military necropolis.

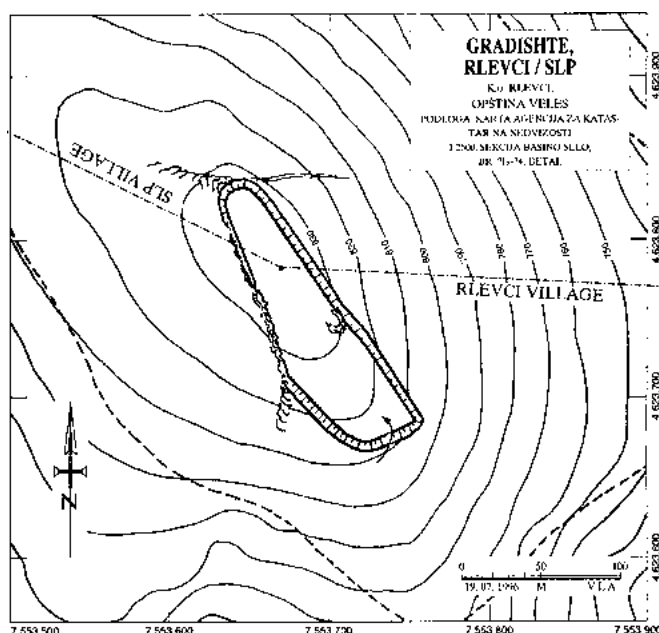


Fig 41 Rlevtsi, Gradište, plan.

Eastern Vardar road 1 (E.R. 1 on the map)

A more significant castle on the Eastern Vardar road was discovered at the site of Markovi Kuli–Letevtsi, in the Pčinja gorge. During the research of this locality, a silver drachma of the Paeonian king Patraeus



Fig 42 Rlevtsi, Gradište, view from the east.

(340/335–315) was discovered. However, no coins of the Antigonid kings of Macedonia have been discovered at this site.

We have to state that King Philip V firmly defended the eastern bank of the Vardar as well, as evidenced by his powerful military base at **Otovičko Kale–Bašino Selo** (No. 3 on the map). On this site, 26 coins were discovered, out of which two of Philip V, 14 of Perseus, three of Philip V or of Perseus, one of Autonomous Macedonia, one Roman Re-

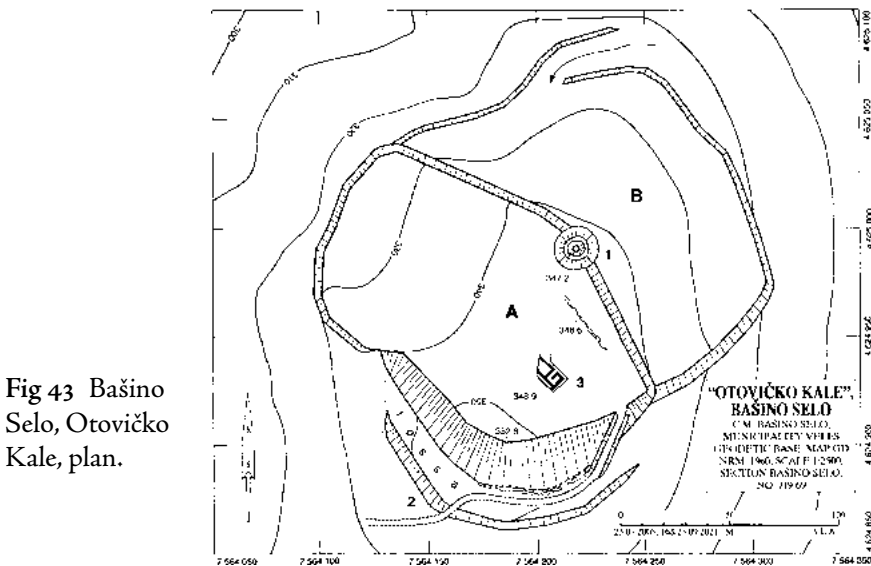


Fig 43 Bašino Selo, Otovičko Kale, plan.

publican, and so on. Here, we must also mention the older finds: one coin of Philip V and two coins of Perseus (Fig. 43–48).



Fig 44 Bašino Selo, Otovičko Kale, north view.



Fig 45 Bašino Selo, Otovičko Kale, bronze coin of Philip V.



Fig 46 Bašino Selo, Otovičko Kale, bronze coin of Perseus.

Fig 47 Bašino Selo, Otovičko Kale, bronze coin of Perseus.

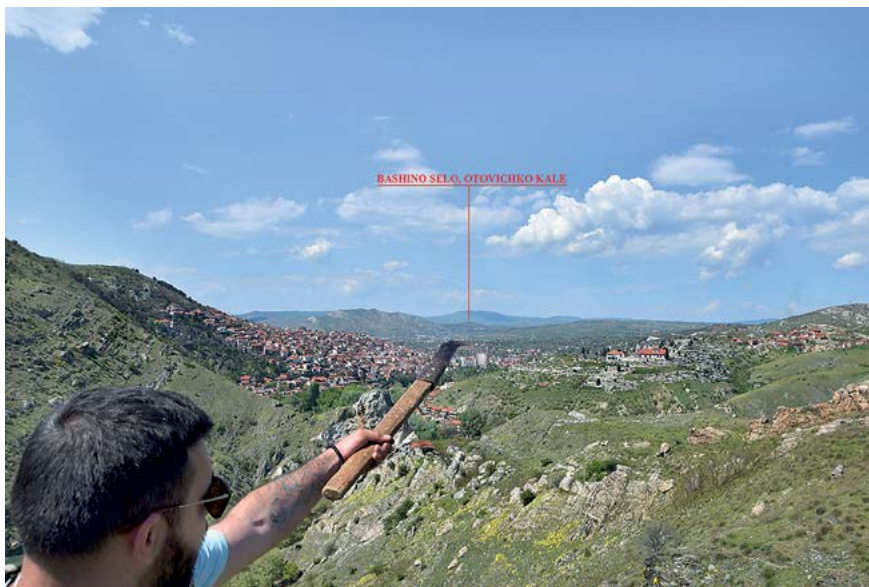


Fig 48 Bašino Selo, Otovičko Kale, view from the Kale Veles.

P. Josifovski published two bronze coins of Philip V and nine bronze coins of Perseus found at this site.¹² N. Sheldarov published 20 coins of Perseus.¹³ The same author also published one coin of Thessalonica and three coins of Autonomous Macedonia under Philip V and Perseus.¹⁴

¹² Јосифовски 1994, 57–62.

¹³ Шелдаров 2013, 32, catalogue numbers with descriptions: 8, 9, 86, 101, 106, 110, 126, 127, 142, 149, 154, 159, 166, 173, 178, 184, 188, 196, 211.

¹⁴ Sheldarov 2003, 260, 648, 670, 690.

As we read the quotation from Polybius carefully, bearing in mind the contexts of the mentioned fortifications with Antigonid military detachments, it becomes more than clear that he was referring to the banks of the Vardar river between the regions of Skopje and Veles.

The mentioned archeological finds unequivocally state that this was the zone on the northern border of the Macedonian Paeonia strategy, which the Macedonian king Philip V ensured by a concentrated stationing of military crews in the mentioned castles.

It is also important that we mention the military campaign of Philip V in 211 BC. Before going south, the king attacked the Illyrians and then marched through Pelagonia in the valley of Babuna. We think that the king entered the Skopje basin via the Western route, and conquered the Agrianian city on the Isar hill, Studeničani (No. 10 on the map), which was then under the rule of the Dardanians. This city is mentioned by Livy as Sintia, but F. Papazoglu points to the correction of this passage presented in the literature by W. Tomaschek: *Dardanorum urbem finitimam*.¹⁵

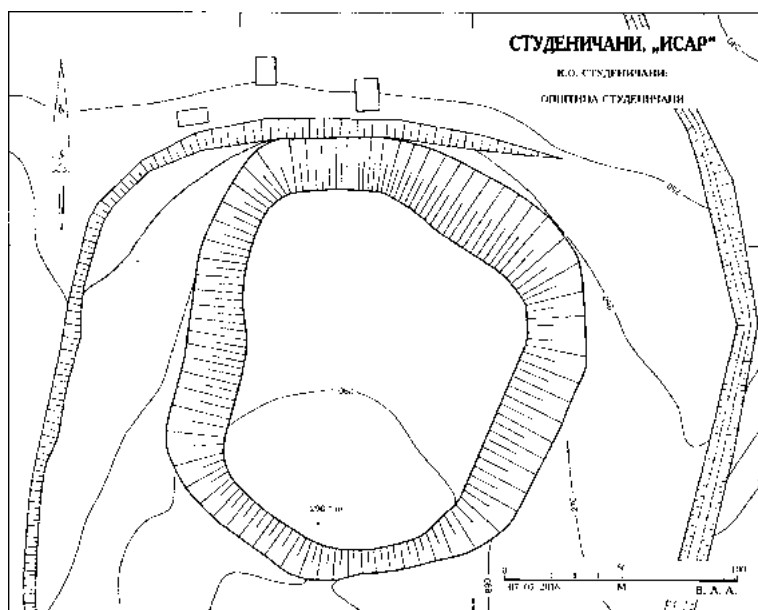


Fig 49 Studeničani, Isar, Plan.

¹⁵ Papazoglu 1969, 116–117.

At the site of Isar–Studeničani, we have found bronze coins of: Pella (three coins), Thessalonica (three coins), Amphipolis (one coin), Autonomous Macedonia minted under Philip V and Perseus (one coin),¹⁶ possibly indicating an Antigonid military regiments in the city, the result of the mentioned historical data in Livy (Fig. 49–58).



Fig 50 Studeničani, Isar, part of an architrave of a local temple in the Doric style.



Fig 51
Studeničani,
Isar, bronze
coin of Pella.

¹⁶ Lilčić Adams 2020, 151.



Fig 52 Studeničani, Isar, bronze coin of Pella.



Fig 53 Studeničani, Isar, bronze coin of Pella.



Fig 54 Studeničani, Isar, bronze coin of Pella.



Fig 55 Studeničani, Isar, bronze coin of Pella.

Fig 56
Studeničani,
Isar, bronze coin
of Pella.



Fig 57
Studeničani,
Isar, bronze coin
of Amphipolis.



Fig 58
Studeničani,
Isar, bronze coin
of Pella.



In the context of Philip's conquest of Bylazora and the securing of the northern border, Papazoglu recalls the sources according to which, in 209 BC, a strong and deep Dardanian breakthrough took place in Macedonia, but through the western corridors, through Pelagonia and Lynceus, all the way to Orestis.¹⁷ F. Papazoglu assumes that this western direction of the Dardanian breach is due to the strong control of the Vardar valley by King Philip V, dictated by the conquered city of Bylazora.

¹⁷ Papazoglu 1969, 117–118, n. 74.

Apart from the mentioned main roads, Western Road 1 and Eastern Road 1, along the banks of the Vardar two additional, but less frequented, roads were in use: Western Road 2, and Eastern Road 2 (W.R. 2 and E.R. 2 on the Map Fig 1).¹⁸

2. Titus Livius, Perseus, and Bylazora

Fanula Papazoglu also points to the information of Titus Livius, according to which Perseus, after reaching the city of Almana, encamped with the army on the banks of the river Axios.¹⁹

In the time of Papazoglu's research activities, the city of Almana had not been located yet, nor the camp of Perseus. However, since V. Lilčić Adams located the city of Almana at the site of Gradište–Kočilari (No. 12 on the map, Fig. 59–65),²⁰ and the camp of Perseus at the site of Asarlak–Kočilari (No. 3 on the map, Fig. 66–69),²¹ things became more clear.

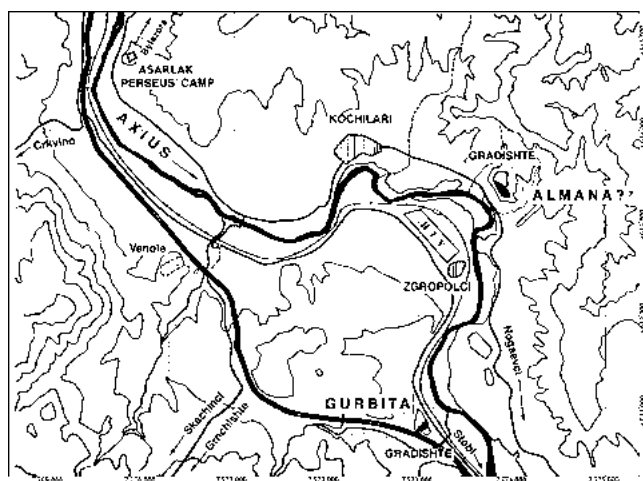


Fig 59 Map showing the position of the city of Almana and the camp of Perseus by the Axios.

¹⁸ Western Route 2 was controlled by two particularly small fortifications: Karabunište–Kula Penjok (early and late Roman period, third and fourth centuries AD) and Karabunište–Kale Tsutsuligovo (late Roman period). Eastern Route 2 was also controlled by two small fortifications: Pakoševo–Pakoševska Karpa (three cultural horizons: Bronze Age, early Antiquity, and late Roman period), and Kožle–Jasikovec (two cultural horizons: early Antiquity and late Roman period). During the research of these sites, no remains from the time of the last Antigonid kings of Macedonia were discovered.

¹⁹ Papazoglou 1988, 309–310.

²⁰ Лилчиќ Адамс 2010, 23–28.

²¹ Lilčić Adams 2009, 467–472.

Fig 6o Kočilari,
Gradište, Almana,
plan.

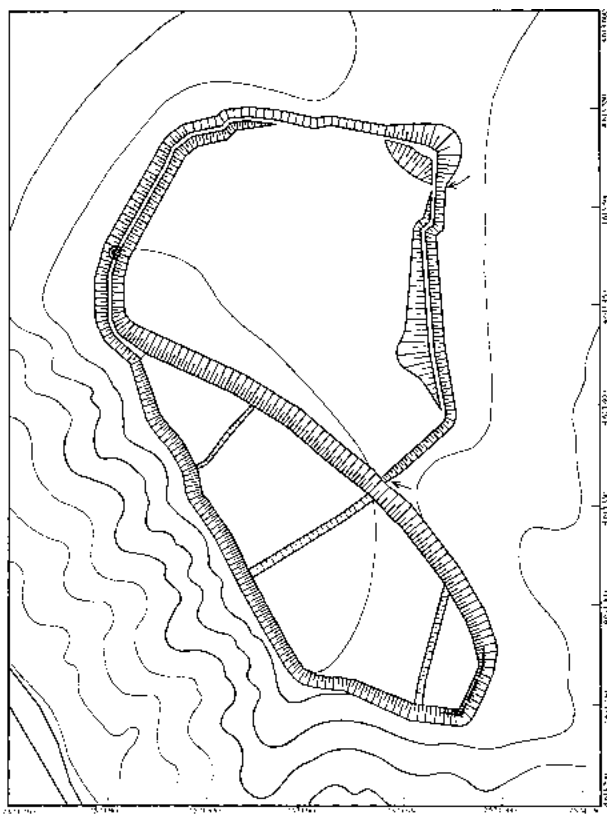


Fig 61 Kočilari, Gradište, Almana, view from the south-east.



Fig 62 Kočilari, Gradište, Almana, bronze coin of Perseus.



Fig 63 Kočilari, Gradište, Almana, bronze coin of Perseus.



Fig 64 Kočilari, Gradište, Almana, bronze coin of Pella.



Fig 65 Kočilari, Gradište, Almana, bronze coin of Amphipolis.

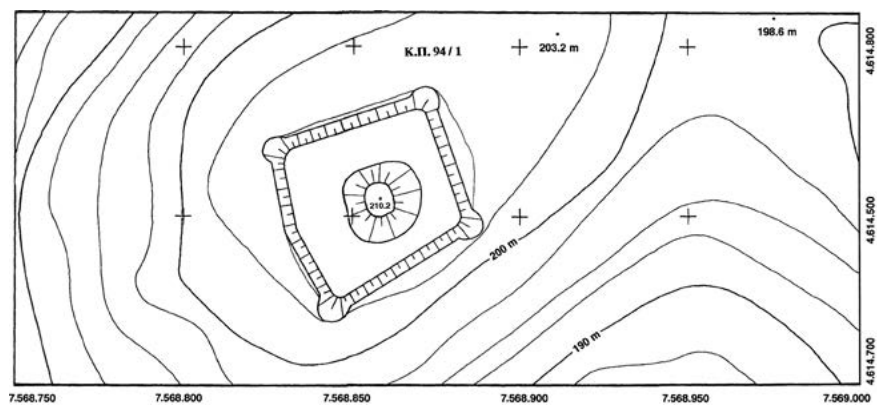


Fig 66 Kočilari, Asarlak, plan.

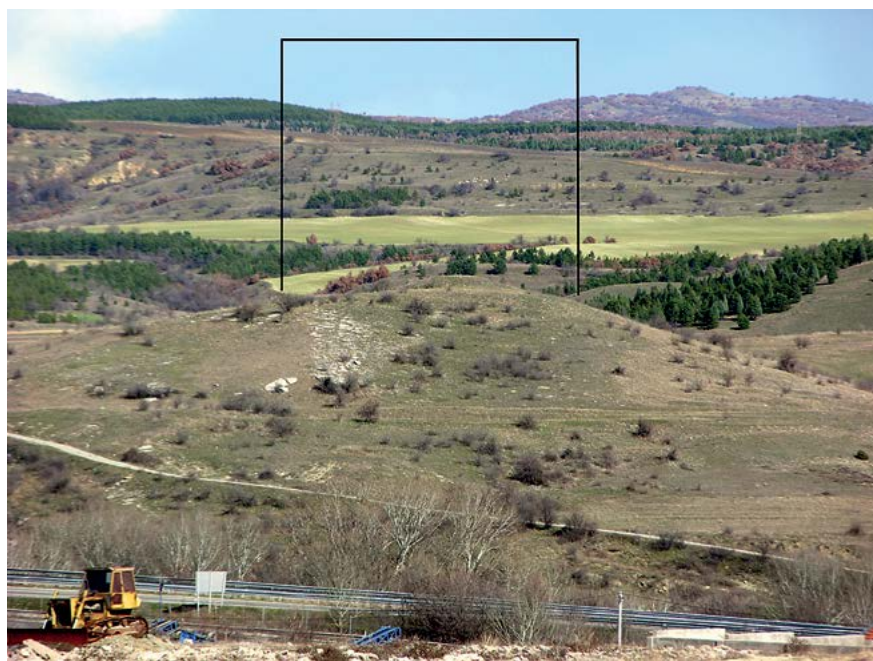


Fig 67 Kočilari, Asarlak, view from the west.



Fig 68 Kočilari, Asarlak, view of the plain north in front of Perseus' camp.



Fig 69 Kočilari, Asarlak, bronze coin of Perseus.

Livy does not name Bylazora as a city, but as a *place* located in Paeonia (*ad Bylazora – Paeoniae is locus est*).

Perseus evidently did not intend to march further, but rested his army and waited for the Bastarnae on the left bank of the Vardar. It is the area in front of the village of Karaslari. The city of Kale–Veles is located 4.7 kilometers west–north–west. Livy mentioned two cities: Almana, Bylazora, and the river Axios (Vardar).

The area to the north–north-east of the Asarlak site, Kočilari village, where Perseus was stationed with the army, represents the outskirts of the Ovčepole plain. It is obvious that Perseus, in case of a sudden clash with the Bastarnae, planned to develop the phalanx in battle order at this exact place.

3. Kale, Veles, Bylazora: position, finds, views towards Philip's castles Otovičko Kale–Bašino Selo, and Kale Prevalets–Veles

On the site of Veleško Kale–Veles (No. 1 on the map), there are remains of a significant archaic, ancient, and mediaeval city. I. Mikulčić was the first to investigate its remains, draw the planimetry, and to publish it.²²

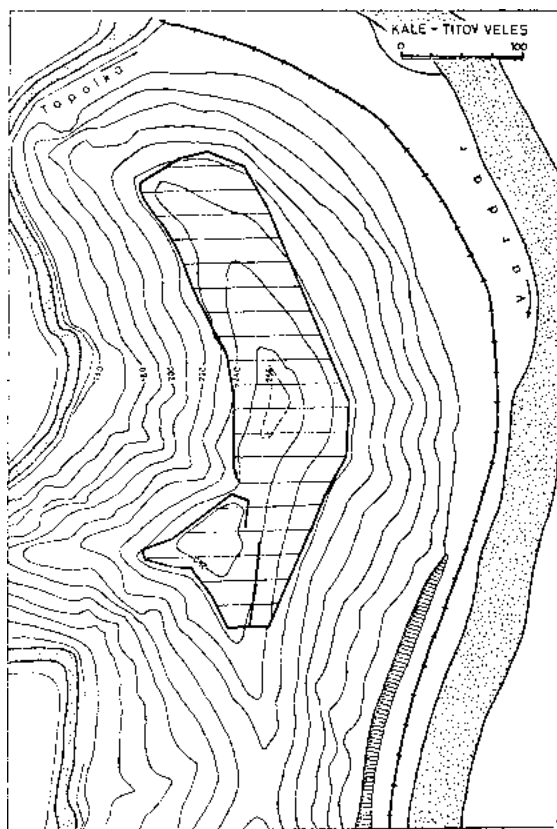


Fig 70 Veles, Kale, plan by I. Mikulčić.

²² Микулчић 1985, 82–100.



Fig 71 Veles, Kale, view from the east, photography with the courtesy of Slobodan Gjorgiev.

The city is located on a dominant hill, above the confluence of the Topolka river into the Vardar. It has an acropolis, a fortified northern suburb, and a wide, open-type suburb on the eastern slope (Fig. 70, 71). From the modest archaeological research and findings on the surface, it can be said that the cultural horizons of the city have continuity, from Antiquity to the Ottoman period.

The archaic cultural horizon is indirectly hinted at, through the archaic fortress of Kale Prevalets–Veles, which protected the approach to Kale–Veles from the west along the Topolka river valley (see the map fig 1).

The earliest known find from Kale–Veles is a small, massive bronze rosette ring with eight ball ends, dated to the fifth–fourth century BC (Fig 72).

A dozen bronze coins from the time of the Macedonian kings Philip V and Perseus were discovered at the Veles Fortress. Two coins of Thessalonica are in the Museum of Veles. One at the Faculty of Philosophy in Skopje (Fig. 73). Within the framework of the reconnaissance of the Veleško Kale, by the end of 2023, V. Lilčić Adams discovered: one coin of Perseus, two coins of Pella, one of Amphipolis, one coin of Autonomous Macedonia (187/6–168), one coin of the Roman quaestor G. Tamius Publius (148–146). A part of a handle support of an ancient mil-

itary cauldron – lebes was also discovered. And a bronze coin from the first century BC, probably of Thessalonica, has been discovered as well. One silver denarius of Mark Antony from 32–31 BC, and a lead weight from early Antiquity have also been unearthed. On the western slope, under the acropolis, we discovered four small bronze arrowheads characteristic of the period of the third–second century BC (Fig. 74–77).²³ These arrowheads point to an attack on the city. Also coins from the third century AD were discovered (Gordian III, Viminacium mint, year 9), fourth century coins (Valentinian II, Theodosius), sixth century AD coins (Justinian and Justin II), as well as several Byzantine coins of the Uraniscos/Scyphate type, and one silver mediaeval Turkish coin.²⁴

Fig 72 Veles, Kale,
bronze rosette ring
5th–4th century BC.



Fig 73 Veles, Kale,
bronze coin of
Thessalonica.



²³ The discovered arrows are three-ribbed, designed to penetrate body armor, and are assumed to have belonged to the army of Philip V, which conquered the city of Bylazora in 217 BC.

²⁴ Unfortunately, the site has never been subject to systematic archaeological investigation and has only been explored through sporadic campaign-based efforts. As a result, there is no substantial archaeological literature on the site, with the exception of the work of Professor Ivan Mikulčić from 1976 and 1995.



Fig 74 Veles, Kale, bronze arrowhead 1, so-called Scythian type.

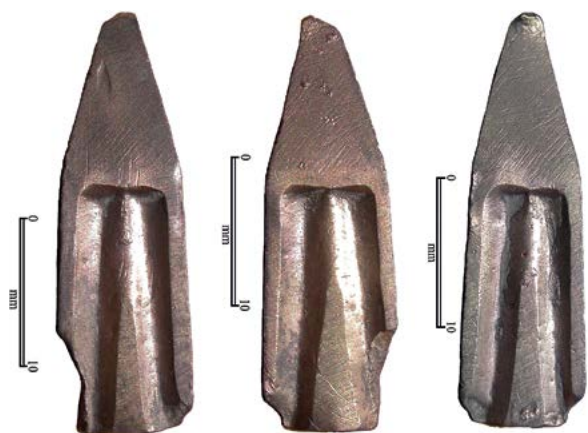


Fig 75 Veles, Kale, bronze arrowhead 2, so-called Scythian type.





Fig 76 Veles, Kale,
bronze arrowhead 3,
so-called Scythian
type.



Fig 77 Veles, Kale,
bronze arrowhead
4, so-called
Scythian type.



A silver tetradrachm of Philip V (Fig. 78) has been noted in the Sheldarov collection,²⁵ which may have come from either Kale–Veles or Kale Prevalets–Veles.

Fig 78 Veles, silver tetradrachm of King Philip V, Sheldarov collection.



Despite the fact that the city of Kale–Veles is located at a strategically important crossroads along the river Axios and its right tributary the Topolka, it was still located on a relatively lower hill than the surrounding high hills. This circumstance made the city particularly vulnerable during possible attacks. However, it is customary in such circumstances for cities to protect the approaches with auxiliary guard castles. The city of Kale–Veles had two auxiliary fortresses: Otovičko Kale–Bašino Selo in the north, and Kale Prevalets–Veles in the west.

From the acropolis of Kale–Veles in the north, an extraordinary view is offered to the Antigonid military base of Otovičko Kale–Bašino Selo, at 7.49 km. While to the west, there is also an extraordinary view towards Kale Prevalets–Veles, 1.9 km away; further, from Kale Prevalets, there is an excellent view of the acropolis of Korija–Raštani, at 5.87 km, which housed the aforementioned Antigonid military detachments of Philip V and Perseus.

Fanula Papapazoglu points out that the name of the city of Bylazora was last mentioned in the sources in 168 BC, and that the name of the city of Veles was mentioned for the first time in 1018. Between these two mentions, 1186 years have passed.²⁶

In the meantime, the *Tabula Peutingeriana* road map appeared. Its protogenous source dates back to the middle of the fourth century AD.

²⁵ Sheldarov 2003, 106–107, no. 527.

²⁶ On the campaign of Philip V see Papazoglou 1988, 310.



Fig 79 Veles, Kale, Part of a handle support of an ancient military cauldron – lebes.

On the road along the river Axios, according to this map, from Stobi to Scupi, there are stations Gurbita, *ad Cephalon*, and others. Gurbita is located in the site of Gradište–Zgropolci, whereat the distance from Stobi to Gurbita (Gradište–Zgropolci) is eight Roman miles, which corresponds to the distance from Stobi to Gradište–Zgropolci, 11.83 km.

The next station from Gurbita, *ad Cephalon*, according to the *Tabula Peutingeriana*, is 13 Roman miles (19.23 km) distant from the starting point. However, the distance from Gradište–Zgropolci to Kale–Veles, along the right bank of the Vardar, is somewhat shorter, 13.5 km. Thus 5.73 km are missing. We think that in this case the name *ad Cephalon* does not indicate the name of a city/station, but a place/setting. *Ad Cephalon* can, for example, mean “main place/main point, point”. Perhaps it was a point where the river Vardar could be crossed; in our case, maybe it is the site of Lokva on the Vardar, from where the road led to the ancient settlement at the eastern foot of Otovičko Kale–Bašino Selo. The purpose of this crossing was to bypass the inaccessible gorge between the villages of Bašino Selo and Novačani. F. Papazoglu mentions a suitable analogy, on naming a place on the *Tabula Peutingeriana* according to a local setting. According to her, the name *stenai* refers to the rocky strait near Demir Kapija, and not the real name of the city, which is located in the locality Banja Klisursko Malo in Demir Kapija.²⁷

²⁷ Papazoglou 1988, 324–325.

Finally, we would refer to Polybius': Βυλάζωρα μεγίστην ὕσαν τῆς Παιονίας, which is usually translated as "Bylazora *the largest city* in Paeonia", however this does need not be understood or interpreted literally. Namely, μεγίστην could also mean the *famous, great, or renowned* city of Bylazora.²⁸ Or perhaps, the *most exposed* Paeonian city.²⁹

Finally, we believe that the name of the modern city of Veles is directly derived from the name of the ancient city of Bylazora, a fact that is indirectly supported by the archaeological findings and observations presented in this paper.

²⁸ Oral interpretation by Professors Valerij Sofronievski and Vojislav Sarakinski from the Faculty of Philosophy in Skopje, to whom we give thanks.

²⁹ For this possible interpretation, we thank our respected colleague Dr Anita Vasilkovska Midoska from the Veles National Museum.

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Vladimir P. Petrović

*Institute for Balkan Studies
Serbian Academy of Sciences and Arts
Belgrade, Serbia*

Roman Taurunum: The Extreme East of the Province of Pannonia

Abstract: This study's geographical scope explicitly covers the eastern part of southern Pannonia, which corresponds to present-day Serbia. The fortifications on the Danube Limes in Lower Pannonia, south of the Drava river, built on the right bank of the river, were connected by land. Roman *Taurunum* (Zemun) was strategically important because it is located at the confluence of the Sava and Danube rivers and was located at the crossroads of the most important communications in Pannonia, which ran through the valleys of the Drava, Sava, and Danube. *Taurunum*, probably during the reign of Emperor Vespasian, became one of the main ports of the river fleet in Pannonia (*Classis Flavia Pannonica*) in the southern part of the province, which largely contributed to the fact that this settlement evolved differently, in several respects, from the other fortifications of the Danube Limes.

Key words: Danubian Limes, Roman Taurunum, Pannonian River Fleet

Southern Pannonia in the Roman epoch covered the area between the Drava river in the north and the southern border of the province,¹ which ran well south of the right bank of the Sava river, following the line of these modern-day place names (W—E): Drvar–Mrkonjić Grad–Zavidovići–Valjevo–Lapovo.² In the west, the Roman province of Pannonia

* vladimir.petrovic@bi.sanu.ac.rs

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² Dušanić 2004, 247–270.

extended as far as the town of *Poetovio* (Ptuj) and the settlement of *Acer-vum* (Stičina) or Ivančna Gorica, 18 miles east of *Emona* (Ljubljana).³ At the same time, in the east, it covered the right bank of the Danube, from *Mursa* (Osijek) in the north to *Taurunum* (Zemun) in the south. The whole of Southern Pannonia corresponds to portions of various modern states: Slovenia, Croatia, Bosnia and Herzegovina (both the Federation of Bosnia and Herzegovina and the Republic of Srpska), and Serbia. This study's geographical scope explicitly covers the eastern part of southern Pannonia, which corresponds to present-day Serbia.

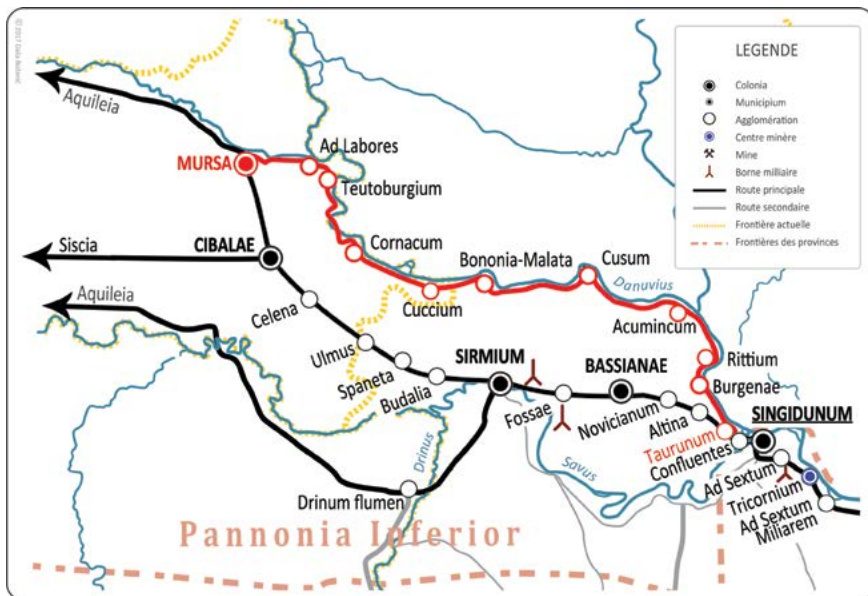


Fig. 1. Roman Roads and Settlements – SE Pannonia.

The Pannonian Limes Route: *Mursa–Taurunum*

The fortifications on the Danube Limes in Lower Pannonia, south of the Drava river, built on the right bank of the river, were connected by land.

³ AE 2002, 532a–c; Šašel–Kos 2003, 11–17.

Information on this crucial Roman road appears in Roman itineraries such as the *Tabula Peutingeriana* and the Antonine Itinerary:

– *Tabula Peutingeriana*, segm. V: Mursa XVI Tittoburgo Ad Labores...; XIII Tittoburgo XVI Cornaco XIII Cuccio XVI Milatis XVI Cusum VIII Bittio XL Acunum XIII Burgenis X Tauruno.⁴

– *Itinerarium Antonini* (per ripam Pannoniae a Tauruno; It. Ant., 241, 3–243, 5): Mursa XVI Teutiburgio Cornaco XVI Cucci XVI Bononia XVI Cusi XXXIII Aciminci XXXVI A Tauruno Ritti In Medio.⁵

The total distance between *Mursa* and *Taurunum*, that is, between Osijek in present-day Croatia and Zemun near Belgrade in Serbia, was 148 miles (ca. 210 km) according to the *Tabula Peutingeriana*, or 133 miles (ca. 189 km) according to the *Itinerarium Antonini*. This mileage corresponds to the contemporary distance between these two cities if one follows the modern road along the Danube. The difference of 15 miles is consistent if one considers the mountainous terrain on the sections of the road that pass through the Fruška Gora mountain (*Alma Mons*).

However, as K. Miller suggests, some distances need to be revised, such as the distance between *Acumincum* and *Taurunum* (26 instead of 36 miles), or between *Cusum* and *Acumincum* (23 instead of 33).

The section of this vital communication route in present-day Serbia is the *Bononia* (*Malata*)—*Taurunum* axis. The road begins at *Mursa* (Osijek), a Roman colony since Hadrian's time (*Colonia Aelia Mursa*), an important urban and military centre at the crossroads of significant land and river routes. It ends at *Taurunum*, at the confluence of the Sava and Danube rivers.

Taurunum

The location of *Taurunum* is in the area of today's Zemun by Belgrade in Serbia, in the easternmost point of the Roman province of Lower Pannonia.⁶ This town is strategically important because it is located at the

⁴ Miller 1916, 434–435.

⁵ *Ibid.*, p. LX.

⁶ Sources: Tab. Peut. 6.4; Ptol. 2.15.3 (*Taurounon*); Plin. NH 3.147 (*Taurunum ubi Danuvio miscetur Savus*); military port (*Classis Flavia Pannonica*), the headquarters of some detachments of the VII Claudia legion and mixed units (*exercitus Pannonica*). In the fourth

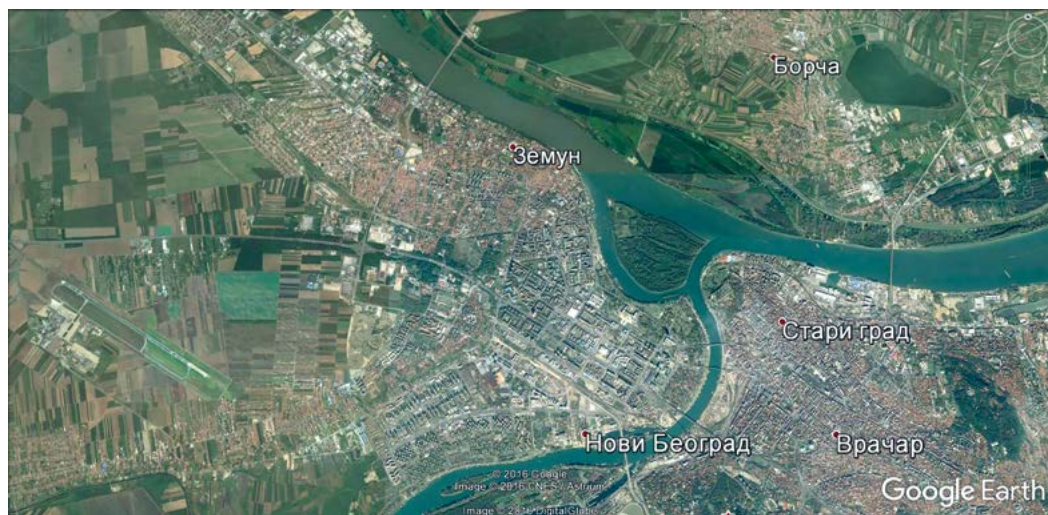


Fig 2. Taurinum, Satellite View.

confluence of the Sava and Danube rivers.⁷ Archaeological research has not been systematic, so we have little information about *Taurinum*.

Rare finds dating from the ancient period in the Zemun area allow us to reconstruct the general urban layout, including the fortifications, necropoleis, villas in the surrounding area, and suburban roads.⁸

The oldest Roman fortification – not a very extensive one – was probably built on the site of a native village (*Gardoški breg*). At the end of the 19th century, a landslide of the *Gardoški breg* caused the collapse of a part of a Roman wall, perhaps the rampart, which is believed to have contained a medallion from 16 AD.⁹ Much later, a mediaeval town arose on the foundations of this fortification.

During the second and third centuries BC, a more extensive fortification with towers and gates was built in the plain bordering the Danube

century, the *Notitia* (*Not. Dign. occ.* 31.91.116) mentions equestrians, *equites promoti*, and the unit of pontoon builders, *auxilia ascari*. Inscriptions: *CIL* III 10675, *CIL* III 13355, *CIL* III 13394, *CIL* III 143408, *CIL* III 143409, *CIL* III 143410, *CIL* III 15137.

⁷ Dimitrijević 1961, 93–103; Dimitrijević 1987, 41–43; TIR, L–34, Aquincum, 110; Шкриванић 1975, 44; Црнобрња 1984; Петровић et al. 1995, 17–21; Najhold 2015; Црнобрња 2015, 133–134.

⁸ Петровић et al. 1995, 17–21; Petrović 2019, 51–52.

⁹ Петровић et al. 1995, 18.

and reaching approximately the present-day centre of Zemun. These remains and parts of various intramural monuments have been identified in several places, including the wall section that reaches a thickness of 3 m, and two circular towers. The existence of a massive wall that could represent the north-western border of the castellum of *Taurunum* has also been confirmed.¹⁰

Due to chance finds, the interior layout of the fortification has been reconstructed. An inscription and votive reliefs suggest the existence of a temple dedicated to Liber-Dionysus.¹¹ A relief depicting Asclepius, Hygieia, and Telephus reveals a cult in their honour. The often discovered Roman walls and mobile findings belong to various buildings whose plan and nature cannot be determined with certainty.

Roman *Taurunum* was located at the crossroads of the most important communications in Pannonia, which ran through the valleys of the Drava, Sava, and Danube. The first river fleet in Pannonia (*Classis Flavia Pannonica*) was established during the Flavian era, and its presence on the Danube and Sava can be traced until the collapse of the Roman Empire.¹² *Taurunum*, probably during the reign of Emperor Vespasian, became one of the main ports in the southern part of the province, which largely contributed to the fact that this settlement evolved differently, in several respects, from other fortifications of the Danube Limes. No Roman military units are mentioned at *Taurunum* until the fourth century AD. This role as a port city (*Taurunum classis*) is recorded in the Antonine Itinerary.¹³

Numerous inscriptions from the territory of Zemun mention members of the river fleet: the altar of Iulius Celer, scribe of the Pannonian fleet, dedicated to Jupiter in 175 AD; the sarcophagus of Caius Iulius Severus, a veteran of the fleet from the third century AD;¹⁴ and the votive relief of Iulius Magnus, *duplicarius*,¹⁵ who probably served in the Pannonian fleet, dedicated to Asclepius and Hygieia.

The earliest Roman necropolis is thought to date from the end of

¹⁰ Dimitrijević 1987, 44.

¹¹ *AE* 1901, 220.

¹² *CIL* III 10675; Душанић 1968, 107; Димитријевић 1996, 12–13.

¹³ *It. Ant.* 131, 6; 242, 1.

¹⁴ *ILJug* I 278.

¹⁵ *CIL* III 15137.



Fig. 3 Inscription of Iulius Celer, scribe of Pannonian fleet from Taurunum, *ILJug I 278*: *I(ovi) O(ptimo) M(aximo) / Paterno / Iul(ius) Celer / scriba cl(assis) / [v(otum)] s(olvit) l(ibens) l(aetus) m(erito) / Pisone co(n)s(ule)*.



Fig. 4 Tombstone from Taurunum, *AE 1964, 256*: *D(is) M(anibus) / Perpetuae secu(ritati) Aur(elia) Bittel/liana(?) ex provin(cia) / Ital(ia) vix(it) an(nos) XX Flor(entino) filio Aur(elius) / Florus pr[o]t(ector) duc/[en(ari- us)] coniu[g]i [3] / B [*

the first century AD, which is confirmed by the discovery of a child's grave with complete grave goods (lamp, coins of Domitian).

The necropolis of the second–third centuries AD was located at the place called “Gardoš”, while a later cemetery from the third and fourth centuries extended at the foot of the hill. Graves from Late Antiquity have also been found along the roads leading out of the city.¹⁶

¹⁶ Петровић et al. 1995, 18–21.



Fig. 5 Museum of the City of Zemun.

In the suburban area (*suburbium*) of *Taurunum*, a villa was located, and a lamp, an anthropomorphic vase, and a bronze statue of Hermes-Totus were found. On a hillock, foundations of walls, bricks, and ceramics were located at “Klisina”, between the railway and the road to Batajnica (the western suburb of modern-day Zemun). It is uncertain whether this was a small fortification; it could also be a villa. The route of the Roman road, over a length of about 8 km in a westerly direction, was also confirmed (a barely visible causeway, sporadically paved with large cut stones). A square tower (8.70 × 8.70 m) was excavated next to the road, built of large cut stones and pebbles in limestone mortar. From the presence of *spoliae* (in this case, part of a funerary monument representing Medusa and a vine in bas-relief) in the construction, we can conclude that it was built in the fourth century AD.¹⁷

Among all the Pannonian Limes fortifications on the territory of to-

¹⁷ Dimitrijević 1961, 93–103; Петровић et al. 1995, 20.

day's Serbia, *Taurunum* certainly had the most important role. That conclusion can be drawn based on its strategically important position at the crossroads of the most important land communications and fluvial routes of the Danube and Sava rivers. In this regard, apart from its military role, the special importance of *Taurunum* is also reflected in terms of the seat of the Pannonian fleet, as it was one of its most important ports. In addition, near *Taurunum* was the border of the provinces of Pannonia and Upper Moesia, between *Confluentes* and *Singidunum*, where there was a customs station and a crossing over the Sava river.¹⁸ In archaeological terms, it is not easy to reconstruct the plan of the Roman fortification, and especially the civilian settlement of *Taurunum*, due to the modern city in its place. Nevertheless, rare epigraphic material and archaeologically documented traces confirm our knowledge and scientific assumptions about the importance of this Pannonian city.

As an addition to everything stated and in connection with the Proceedings dedicated to Academy member Nikola Tasić, it is worth noting that he was one of the most important researchers of the Museum of the City of Zemun who, as he often said, spent his best professional days working on the area of Roman *Taurunum*.

¹⁸ Crnobrnja 2009, 155–164.

List of Abbreviations

- AE – *L' année épigraphique*, 1888–. Paris.
- CIL – Mommsen, T. ed. 1873–. *Corpus Inscriptionum Latinarum*. Berlin: Reimer.
- ILJug – Šašel, A. and J. Šašel. *Inscriptiones Latinae quae in Iugoslavia inter annos MCMXL et MCMLX repertae et editae sunt*. Ljubljana: SAZU, 1963.
- TIR – *Tabula Imperii Romani*, L-34: Aquincum – Sarmizegetusa – Sirmium. 1968. Budapest: A. M. Hakkert.
- It. Ant. – *Itinerarium Antonini*. Cuntz, O. 1929. *Itineraria Romana*, vol. 1: *Itineraria Antonini Augusti et Burdigalense*. Leipzig: Teubner.
- Tab. Peut. – Weber, E. 1976. *Tabula Peutingeriana. Codex Vindebonensis 324*. Graz: Akademische Druck- u. Verlagsanstalt.
- Not. dign. – *Notitia dignitatum in partibus occidentis*. Seeck, O. 1876. *Notitia dignitatum; accedunt Notitia urbis Constantinopolitanae et laterculi prouinciarum*. Berlin: Weidmann.
- Ptol. – Claudius Ptolemy. 1932. *The Geography*. Translated and edited by E. L. Stevenson. New York: Dover Publications.
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Gordana D. Jeremić*

Institute of Archaeology
Belgrade, Serbia

Archaeological data on cheese production in the Roman period and Late Antiquity in the Central Balkans

Abstract: This contribution aims to shed light on a crucial food source for the communities inhabiting the territory of the present-day Republic of Serbia, in the Central Balkans, during the Roman era and Late Antiquity, primarily focused on archaeological finds. In the archaeological material, the traces of cheese production are not just followed, but substantiated by finds of conical, cylindrical, and hemispherical clay moulds with perforations, in which the cheese-making process took place. The finds of strainers, as an important kitchen item in cheese processing, are also included in the analysis.

To date, approximately 42 finds of these vessels have been recorded at 16 sites. The finds indicate that cheese was not only produced but also widely distributed, both in rural and in urban areas, as well as in military cooking areas within some fortifications. The preparation of cheese was present in all periods of the Roman Empire on the soil of the Central Balkans, with its roots in the autochthonous cultures of previous epochs.

Keywords: cheese production, clay moulds, strainer, Roman era, Late Antiquity, Central Balkans

This paper pays tribute to our esteemed archaeologist and member of the Academy, Nikola Tasić, and the subject matter of this contribution centres on the preparation and consumption of dairy products, specifically cheese, during the periods of Roman rule and Late Antiquity, through the prism of pottery finds in the Central Balkans, on the territory of the Republic of Serbia. This subject has its roots in the prehistoric populations of the Neolithic era, who remain insufficiently addressed in Serbian archaeological literature. The discussion undertaken in this pa-

* jeremic.g@gmail.com, gjeremic@ai.ac.rs

per aspires to establish one of the various research connections between chronologically disparate epochs, to which Academy member Nikola Tasić has made an immeasurable contribution within Serbian and European archaeological science. Furthermore, this paper endeavours to honour this distinguished member of the Academy for his invaluable contributions to archaeology, with particular emphasis on nomadic cultures and the pastoral lifestyles of historical communities.

Cheese – significance and history of production

Cheese is one of the most important and diverse products obtained from the milk of certain species of mammals. The most well-known are those produced from cow, goat, sheep or bison milk, and can appear as fresh or as products of different levels of maturity.¹ The main characteristic of cheese is the extended shelf life of the product, compared to milk, which spoils easily due to the presence of bacteria, especially when exposed to heat. The nutritional value of cheese is very high; the percentage of protein and fat makes cheese a high-energy food that is very useful for people who engage in heavy physical work. Cheese is a rich source of basic nutrients, containing proteins, amino acids, fat, fatty acids, vitamins, minerals, and bioactive peptides.²

Cheese is one of the oldest food products, with a long history of production and consumption. The beginnings of its production are related to the process of domestication of mammals. The first consumption of milk probably happened around 10,000 BC in Asia Minor, when goats and sheep were domesticated, and cheese could have been created at the moment when the milk had soured and separated into curds and whey.³

The Greeks and the Romans significantly advanced the practice of cheese-making to an early form of technology, subsequently disseminating it across various regions of Europe.⁴ Cheese produced in Europe, characterised by a cooler climate compared to the Middle East, necessitates reduced salting for effective preservation. With diminished salt content and lower acidity levels, cheese provides an optimal environment for

¹ CODEX STAN 283–1978.

² Walther et al. 2008, 389.

³ *Ibid.* 389–390.

⁴ *Ibid.* 389.

a range of beneficial microbes, contributing to the distinct and intriguing flavours found in aged cheeses.

Numerous ancient sources record information about the process of obtaining cheese, the choice of the type of animal milk, and the benefits of consuming milk and dairy products.⁵ In Homer's *Odyssey*,⁶ in the chapter on the Cyclops, cheese-making is mentioned as a skill. Greece had a long tradition of preparing cheese even before that, as could be concluded from the discovery of a cheese strainer from Thessaly from the period around 3000 BC.⁷ In pre-classical and classical Greece, rennet from animal stomachs was used, and Aristotle recommended that it be obtained from young deer or a cow.⁸ Fig sap squeezed into wool was also used to curdle the milk.

The cheese was preserved in brine and was often eaten with honey at the end of a meal, as a dessert. Since cheese was high in calories, it could be eaten with bread as a modest meal, and in early Byzantine sources it is mentioned as a "delight" (προσφάγιον).⁹ In ancient Roman gastronomy, fresh cheeses from surrounding farms (*villae rusticae*) were particularly prized, as well as pyramid-shaped (*meta*) cheeses from Sassina, or quadratic (*quadrae*) cheeses from Tolosa (Toulouse). Columella advised that apple trees could best smoke cheeses, and he considered the best smoked cheese as originating from the area of Velabrum near Rome.¹⁰ The therapeutic properties of milk and dairy products (*galactology*) were known to ancient physicians and pharmacists, beneficial in treating arthritis, eye diseases, and hysteria.¹¹

Archaeological evidence of cheese production in the Central Balkans

Archaeological evidence of cheese production includes finds of various vessels used for straining and pressing curdled milk. For this purpose, wooden or fired clay containers were often used. Considering that in the Central Balkans on the territory of Serbia, due to the nature of the soil

⁵ Dalby 2003, 80–81.

⁶ Hom. *Od.* 9.237–249.

⁷ Dalby 2003, 80.

⁸ Arist. *Hist. an.* 522a22–b12.

⁹ Dalby 2003, 80.

¹⁰ Columella *De Arb.* 7.8, 12.13.

¹¹ Kokoszko & Dybała 2016, 268–276

organic materials mostly rot, there are available data only on pottery moulds and strainers. Although the strainers did not have an exclusive role in cheese production, they certainly represent a potential container for making cheese, in one of its stages.

A pottery mould is a vessel in the form of a shallow conical or cup-shaped bowl, with an everted rim and a flat bottom, which has regular rows of perforations on the sides, used to drain excess liquid from the cheese mass. The Latin name for such a vessel is *forma*, *formella*.

So far, 42 finds of pottery moulds and strainers are known, mostly published in monographs and journals (Tab. 1).¹² The finds originate from the southern parts of the province of Lower Pannonia (Pannonia Inferior) (1–17), from cities with legionary camps – Singidunum and Viminacium (18–30), towns on the Limes or their hinterland (32–36), as well as from the interior of Upper Moesia (Moesia Superior), and later provinces on its territory (Dacia Ripensis, Dacia Mediterranea, Dardania) (37–42).

This grouping of vessels can be divided into five basic groups, based on their technological characteristics: vessels made of sandy clay, fired in shades of red (from light to dark red (and brown)) (Ware 1); vessels made of finely refined red fired clay (Ware 2); grey fired vessels made of finely refined clay (Ware 3); grey fired vessels made of sandy clay (Ware 4); vessels made of sandy clay fired in yellowish-beige tones (Ware 5).

1. Vessels made of sandy clay, fired in shades of red (Ware 1)

Vessels of sandy clay fired in shades of red represent the most numerous group of finds, with 16 typologically very diverse examples: they consist of vessels with a horizontally everted rim, or a flat or unprofiled rim. The recipient can be cylindrical, conical, calotte-shaped, biconical, or S-profiled; the bottom of the vessels is flat, slightly convex, or rests on a slightly ring-shaped foot. Sometimes the vessels have two opposite handles or one longer one, as paterae, with a circular cross-section. The outer surface can be painted, coated with a matte coating, glazed or polished.

Red-fired vessels appeared throughout the period of Antiquity, from the first to the mid-fifth century, and are present in both rural and urban settings, as well as in military ones.

¹² Ožanić-Roguljić & Raičković Savić 2023

2. Vessels made of finely refined red fired clay (Ware 2)

Six finds of vessels from Viminacium represent this group. The vessels were found in areas where necropoleis and economic quarters with craft workshops spread outside the fortified city and legionary camp.

These vessels are exclusively the finds of strainers. The receptacles of the strainers are mostly calotte-shaped, less often biconical. Most often they have one or two handles. The diameter of the rim is mainly 14–15 cm, and in one case it is 19 cm. Their outer surface is sometimes painted red.

They date from the second to the mid-third century.

3. Grey fired vessels made of finely refined clay (Ware 3)

This group includes eight vessels from seven sites (five in Lower Pannonia and two in Upper Moesia). The group of grey fired vessels consists of S-profile strainers, or calotte-shaped, less often conical moulds.

The vessels are dated from the mid-first to the mid-third century.

4. Grey fired vessels made of sandy clay (Ware 4)

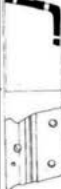
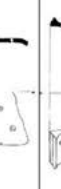
This group includes nine vessels from six sites. Among the finds are strainers (four) and moulds (five), of various recipient profiles (conical, calotte-shaped, biconical, S-profiled). The outer surface is painted in one case.

They date from the second to the sixth century (Romuliana), with the largest number of vessels from the third–fourth century.

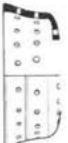
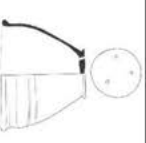
5. Vessels made of sandy clay fired in yellowish-beige tones (Ware 5)

This group of vessels includes only three finds, from two sites: Sirmium and Timacum Minus. They represent cylindrical or calotte-shaped moulds. The outer surfaces are not ornamented.

They date to the imperial period, from the second to the third century.

No.	Site	Type of site; Context of the findings	Datation	Types of moulds	Diameter	Fabric	Drawing	Bibliography
1	Sremska Mitrovica (<i>Sirmium</i>)	<i>colonia</i> Capital of the province	2 nd – 3 rd CE	Ware 5	22 cm	Yellowish-brown, sandy clay		Brukner 1981, T. 99, 3.
2	Sremska Mitrovica (<i>Sirmium</i>)	<i>colonia</i> Capital of the province	2 nd – 3 rd CE	Ware 5	22 cm	Yellowish-brown, sandy clay		Brukner 1981, T. 99, 5.
3	Sremska Mitrovica (<i>Sirmium</i>)	<i>colonia</i> Capital of the province	4 th CE	Ware 1	28 cm	Sandy, red fired clay, glazed		Brukner 1981, T. 99, 1 (a).
4	Sremska Mitrovica (<i>Sirmium</i>)	<i>colonia</i> Capital of the province	4 th CE	Ware 1	28 cm	Sandy, red fired clay, glazed		Brukner 1981, T. 99, 1 (b).
5	Sremska Mitrovica (<i>Sirmium</i>)	<i>colonia</i> Capital of the province	2 nd – 3 rd CE	Ware 1	No data	Sandy, red fired clay		Давидовић 2009, кат. 78.
6	Sremska Mitrovica (<i>Sirmium</i>)	<i>colonia</i> Capital of the province	2 nd – 3 rd CE	Ware 1	No data	Sandy, red fired clay		Давидовић 2009, кат. 79.
7	Stari Slankamen (<i>Acumincum</i>)	Military camp with a settlement	Mid-1st - beginning of the 2nd CE	Ware 3	R 17 cm; H 10 cm	Grey fired clay, fine		Brukner 1981, T. 99, 7; Брукнер 1987, 75, целица, нп. 12.
8	Gomolava	Rural settlement	Mid 1 st CE	Ware 3	20,5 cm	Grey fired fine clay		Jovanović et al. 1988, 141, T. XX, 6.
9	Gomolava	Rural settlement	2 nd – 3 rd CE	Ware 3	18 cm	Light grey fired clay, painted surface		Brukner 1981, T. 99, 4.
10	Gomolava	Rural settlement	2 nd – 3 rd CE	Ware 1	22 cm	Brown fired clay, painted surface		Brukner 1981, T. 99, 8
11	Vojka	Rural settlement	2 nd – 3 rd CE	Ware 4	22 cm	Grey fired clay, painted surface		Brukner 1981, T. 99, 2.

12	Progar	Settlement, harbour, brick industry	2 nd – 3 rd CE	Ware 3	13 cm	Light grey fired clay, painted surface		Brukner 1981, T. 99, 6.
13	Prosina	Rural settlement	3 rd – 4 th CE	Ware 4	R 12 cm	Light grey fired clay		Брукнер 1995, 146, T. III, 27.
14	Prosina	Rural settlement	3 rd – 4 th CE	Ware 1	4,5 x 4,1 cm	Brown fired clay, red painted		Брукнер 1995, 146, T. III, 28.
15	Kudoš, Šašinci	Rural settlement	1 st – 2 nd CE	Ware 1	R 21 cm; H 10 cm	Brown-red fired clay		Брукнер 1995, 148, T. IX, 84.
16	Kudoš, Šašinci	Rural settlement	1 st – 2 nd CE	Ware 3	R 21 cm; H 10 cm	Grey fired clay, finely purified		Брукнер 1995, 148, T. IX, 85.
17	Šimanovci	hut	Second half of the 1 st CE	Ware 3	No data	Grey fired clay		Брукнер 1987, T. 16, 12.
18	Beograd (Singidunum)	Western suburbium in the vicinity of the legionary fortress (castrum)	2 nd – 3 rd CE	Ware 4	R 22,4 cm; H 10 cm	Grey fired clay, polished		Nikolić-Dordević 2000, 181, type XI/1.
19	Beograd (Singidunum)	Legionary fortress (castrum)	First half of the 4 th CE	Ware 4	26,0 cm	Grey fired clay		Nikolić-Dordević 2000, 181, type XI/2.
20	Stari Kostolac (Viminacium)	Capital of the province, necropolis and economic area	Middle of the 2 nd – middle of the 3 rd CE	Ware 2	R 15 cm	Red fired clay, red painted surface		Nikolić, Račković Savić & Mitić 2023, 322, type VII/4.
21	Stari Kostolac (Viminacium)	Capital of the province, necropolis and economic area	Middle of the 2 nd – middle of the 3 rd CE	Ware 2	R 15 cm	Red fired clay, red painted surface		Nikolić, Račković Savić & Mitić 2023, 322, type VII/4.
22	Stari Kostolac (Viminacium)	Capital of the province, necropolis and economic area	Middle of the 2 nd – middle of the 3 rd CE	Ware 2	R 14 cm	Red fired clay, red painted surface		Nikolić, Račković Savić & Mitić 2023, 322, type VII/4.
23	Stari Kostolac (Viminacium)	Capital of the province, necropolis and economic area	Middle of the 2 nd – middle of the 3 rd CE	Ware 2	R 15 cm	Red fired clay, red painted surface		Nikolić, Račković Savić & Mitić 2023, 322, type VII/4.

24	Stari Kostolac (Vinumactum)	Capital of the province, necropolis and economic area	End of the 2 nd – first half of the 3 rd CE	Ware 2	R 14 cm	Red fired clay, red painted surface		Nikolić, Raičković Savić & Mitić 2023, 322, type VII/3.
25	Stari Kostolac (Vinumactum)	Capital of the province, civil settlement, canabae	2 nd CE	Ware 4	R 15.5 cm	Grey fired clay, with admixtures of sand		Nikolić, Raičković Savić & Mitić 2023, 322, type VII/1.
26	Stari Kostolac (Vinumactum)	Capital of the province, civil settlement, canabae	4 th CE	Ware 1	R 17.5 cm	Red fired clay with small admixtures of fine-grained sand. The interior has an olive-coloured glaze.		Nikolić, Raičković Savić & Mitić 2023, 322, type VII/2.
27	Stari Kostolac (Vinumactum)	Capital of the province, amphitheatre	Middle of the 2 nd – middle of the 3 rd CE	Ware 4	R 19 cm	Grey fired clay		Nikolić, Raičković Savić & Mitić 2023, 322, type VII/5.
28	Stari Kostolac (Vinumactum)	Capital of the province, amphitheatre, near the building with the apse	Second half of the 2 nd CE	Ware 4	R 34.5 cm	Grey fired clay with fine-grained sand		Nikolić, Raičković Savić & Mitić 2023, 323, type VII/7.
29	Stari Kostolac (Vinumactum)	Capital of the province, necropolis and economic area	2 nd – 4 th CE	Ware 2	R 12 cm	Red fired clay, red painted and polished surface		Nikolić, Raičković Savić & Mitić 2023, 323, type VII/8.
30	Stari Kostolac (Vinumactum)	Capital of the province, cremation grave	First half of the 3 rd CE	Ware 1	R 22 cm; H 17 cm	Brown fired sandy clay		Nikolić, Raičković Savić & Mitić 2023, 323, type VII/6.
31	Gamzigrad (Romuliana)	Settlement extra muros, civil basilica	End of 4 th – begin of 5 th CE	Ware 1		Sandy, reddish-brown fired clay, brown glazed.		Цвјетковић 2006, 57, тип КАГ 78 (X/3)
32	Gamzigrad (Romuliana)	Settlement extra muros, basilica	2 nd – 3 rd CE	Ware 3	R 20.0 cm; H 5.5 cm	Fine grey fired clay		Conrad 2020, 150, Kat. 16, Abb. 5/16.

33	Ganizgrad (Romuliana)	Fortified imperial palace, tower 19	6 th CE	Ware 4	R 20.0; H 8.0 cm	Sandy, light grey fired clay		Conrad & Premk 2020, 226, 242, cat. No. 148, fig. 14/148
34	Ravna (Timacum Minus)	The tower of the earliest fortification	2 nd CE	Ware 5		Sandy, yellowish-beige fired clay		Drawing A. Premk, documentation of the Institute of Archaeology Belgrade, type XI/2, unpublished
35	Ravna (Timacum Minus)	The tower of the late antique fortification	4 th CE	Ware 1		Brown fired sandy clay		Drawing A. Premk, documentation of the Institute of Archaeology Belgrade, type XI/1, unpublished
36	Mihajlovac-Blato	Fortification	End of 4 th – begin of 5 th CE	Ware 1	R 18 cm; H 4.5 cm	Sandy, light brown fired clay		Tomović 1986, fig. 28, 5; Цвјетковић 2016, 45, тип Ц1.
37	Ćuprija (Horreum Margi)	Fortification	2 nd – 3 rd CE	Ware 3	R 17.0 cm; H 6.6 cm	Sandy, grey fired clay, polished surface		Петковић & Тапавички-Илић 2020, 104, Т. XXXVIII: XI/1.
38	Ćuprija (Horreum Margi)	Fortification	4 th , first half of the 5 th CE	Ware 1	R 19.0 cm; H 8.2 cm	Sandy (with mica), brown fired clay		Петковић & Тапавички-Илић 2020, 104, Т. XXXVIII: XI/2.
39	Novopazarska Banja	Settlement, building C	3 rd – 4 th CE	Ware 1		Red fired clay		Јовановић 1995, 46–47, сл. 13/4, 9.
40	Novopazarska Banja	Settlement, building C	4 th CE	Ware 4		Grey fired clay; olive glazed		Јовановић 1995, 50, сл. 15/9; Цвјетковић 2006, КАГ-79.
41	Davidovac-Gradište	Settlement along the Roman road	2 nd – 4 th CE	Ware 1	H 19 cm	Sandy, brown-reddish fired clay		Unpublished
42	Davidovac-Gradište	Settlement along the Roman road	2 nd – 4 th C	Ware 1	H 21 cm	Sandy, brown-reddish fired clay		Unpublished

Discussion and conclusion

With the process of neolithisation and a sedentary lifestyle, alongside the domestication of mammals, milk and milk products became integral to the diets of prehistoric and, later, historic communities. Cheese, a product of significant nutritional value, is among the most important and diverse items derived from the milk of certain species of mammals, including cows, goats, and sheep. It can present in various forms, ranging from fresh to products at different maturity levels.

In the Roman era, cheese production was highly developed. Ancient writers provided information about the production process and its use in Roman cuisine, medicine, and pharmacology. Animal husbandry was significantly developed in the Roman provinces on the soil of today's Republic of Serbia. According to written sources, the southern areas of Upper Moesia were renowned throughout the Empire for their cheese production. In Late Antiquity, from the third century AD, the territory of southern Pannonia played a significant role in livestock and sheep farming, according to the *Notitia Dignitatum*. Animal products were used in the Roman military industry (*fabricae*), in the production of shields and leather saddles for the army, and in the weaving houses (*gynaeceia*) in Sirmium and Bassiana.¹³ The presence of large herds on the extensive Pannonian pastures would also provide valuable insights into milk and cheese production.

The finds of pottery moulds and strainers from the Roman period and Late Antiquity in the Central Balkans represent significant artefacts that testify to the continuity of dairy production in these areas. Pastoral landscapes, an economy based on agriculture and animal husbandry, as well as numerous categories of the population that used dairy products, primarily cheese, in their daily diet and medicine, contributed to the development of this gastronomic branch.

The finds of moulds and strainers from the Central Balkan region are very typologically diverse, produced using different technological processes, with different treatments of the raw materials (clay of lower or higher purity, addition of aggregates), as well as the outer surface, which could have been painted, matted, polished, or glazed. Among the most common forms of moulds are conical, cylindrical, and calotte-shaped

¹³ Dimitrijević & Whitehouse 2022.

vessels, and in the case of strainers, S-profiled and biconical. They are found both in rural areas (*villae rusticae*, huts), and in urban areas, as well as on the territory of military camps. The vessels were produced over a long period, from the mid-first to the sixth century, testifying to the nutritional importance of cheese in the diet of the Central Balkan population.

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Sanja Pilipović*

Institute of Archaeology
Belgrade, Serbia

Frieze With a Hunting Scene: New Studies on Funerary Stelae of Upper Moesia**

Abstract: The research subjects of this study are funerary stelae from Upper Moesia with friezes depicting animals. The aspiration was to focus on the origin and prevalence of this decorative motif, and thus to better understand the connection between East-Alpine quarries/workshops, from which the marble of the studied stelae came, and Upper Moesia, where this motif was accepted in local workshops.

Key words: frieze, hunting, funerary stelae, Upper Moesia, *Viminacium*, Pannonia, Noricum

The subjects of research

The presented study tries to give a new perspective and to complete the study *La scena di caccia: il motivo di decorazione delle stele funerarie della Moesia Superior*, published in 2008.¹ The 2008 study indicated the existence of one group of funerary stelae from Upper Moesia whose friezes were decorated with hunting scenes. Apart from the possible symbolic meaning, this also indicated a connection with the provinces of Noricum and Pannonia, where this motif was especially widespread.

Interdisciplinary scientific research carried out in the last few years has pointed to the special importance of East-Alpine quarries in the production of marble funerary stelae, which were then distributed as sketched

* sanjapil@gmail.com

** I owe special thanks to Professor Emeritus Bojan Djurić for invaluable advice and information regarding the origin of the stone from which the studied funerary stelae were made.

¹ Pilipović 2008, 337–351.

or semi-finished products, not only in the Norico–Pannonian area but also in Upper Moesia.² Conducted analysis showed that, for the five funerary stelae that are the subjects of this study, East-Alpine marble had been used. To the group of stelae studied in 2008, one more Upper Moesian marble stele was added. It therefore became necessary to return to the investigated theme in accordance with new knowledge, and this time to pay special attention to the ways in which these stelae were created and the connection between the Upper Moesian Limes and Alpine quarries and workshops, as well as those of the Cisalpine area, where friezes with hunting scenes appeared sporadically.

Funerary stelae from the Upper Moesian Limes, with friezes with hunting scenes:

1. Funerary marble stele of M. Valerius Speratus, veteran of the legion VII *Claudia*, decurion of the municipium of *Viminacium*, and prefect of the cohort I *Aquitanorum* (Fig. 1, 1a).³

Dimensions: 175 cm × 75 cm × 20 cm

Provenance: *Viminacium*.

Location: National Museum of Pančevo, inv. 2850st.

Frieze: a galloping deer with a ram's head under its feet, hunter with a raised knife in his raised right hand, a stylised tree, a deer, a lion with a tree behind him.

2. Funerary marble stele of T. Baebius Eutychus, the *augustalis* of the municipium of *Viminacium* (Fig. 2, 2a).⁴

Dimensions: 250 cm × 90 cm × 25 cm

Provenance: *Viminacium*.

Location: National Museum of Požarevac, inv. C – 12736.

Frieze: a bear, a wild boar, a dog, and a rabbit.

² Djurić 2005, 75–82; Djurić 2008, 159–165; Djurić & Müller 2009, 111–127; Pochmarski 2012, 29–36; Djurić 2016, 176; Djurić, Kele & Rižnar 2018, 545–556; Migotti 2016, 171–204; Djurić 2019, 8–38.

³ Pilipović 2008, n. 2; Pilipović 2022, n. 28, with previous bibliography; Lupa 33243.

⁴ Pilipović 2022, n. 30, with previous bibliography; EDH 36245; Lupa 5431.



Fig. 1. Marble funerary stele of M. Valerius Speratus from Viminacium. National Museum of Pančevo, inv. 2850st. (photo: © National Museum of Pančevo).



Fig. 1a. Marble funerary stele of M. Valerius Speratus, reconstruction proposal (Sanja Pilipović).



Fig. 2. Marble funerary stele of T. Baebius Eutychus from Viminacium. National Museum of Požarevac, inv. C – 12736 (photo: © National Museum of Požarevac).

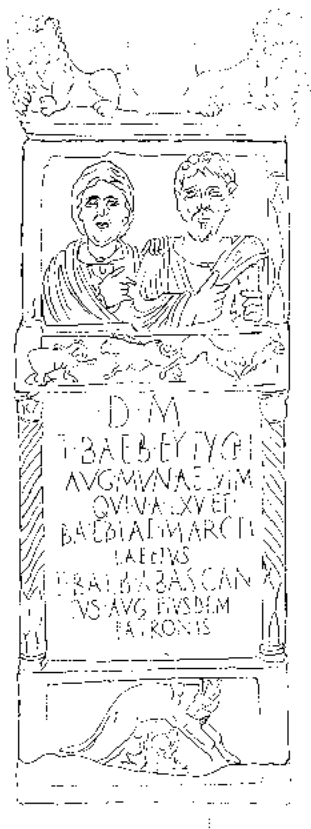


Fig. 2a. Marble funerary stele of T. Baebius Eutychus, reconstruction proposal (Sanja Pilipović).

3. Funerary marble stele of C. Cornelius Rufus, the decurion and augur of the municipium of Viminacium (Fig. 3).⁵

Dimensions: 10 cm × 10,5 cm × 0,45 cm

Provenance: Viminacium.

Location: National Museum of Požarevac, inv. 02_2641.

Frieze: a bear, a horse, and a wild bear.

⁵ Pilipović 2008, n. 1; Pilipović 2022, n. 30, with previous bibliography; EDH 35758; Lupa 5412.



Fig. 3. Marble funerary stele of C. Cornelius Rufus from Viminacium. National Museum of Požarevac, inv. 02_2641 (photo: © National Museum of Požarevac).

4. Funerary marble stele of L. Blassius Nigellio, speculator of the legion VII *Claudia* – fragment (Fig. 4).⁶

Dimensions: 175 cm × 132 cm × 30 cm

Provenance: Viminacium.

Location: Lapidarium of the National Museum in Belgrade, inv. 75.

Frieze: a dog chasing a rabbit, and a dog chasing a bear.

⁶ Pilipović 2008, n. 3; Pilipović 2022, n. 27, with previous bibliography; EDH 32764; Lupa 19498.



Fig. 4. Marble funerary stele of *L. Blassius Nigellio* from *Viminacium*. Lapidarium of the National Museum in Belgrade, inv. 75 (photo: ©National Museum in Belgrade).

5. Funerary marble stele with *Heracles* and *Alcestis* – fragment (Fig. 5).⁷

Dimensions: 110 cm × 120 cm

Provenance: *Viminacium* (?).

Location: *Spolia* built into Tower 3 of the Small Fortification in the Smederevo fortress.

Frieze: a bear, a wild boar, a dog, and a dog chasing a rabbit.

⁷ Pilipović 2008, n. 6; Pilipović 2022, n. 61, with previous bibliography; Lupa 28821.

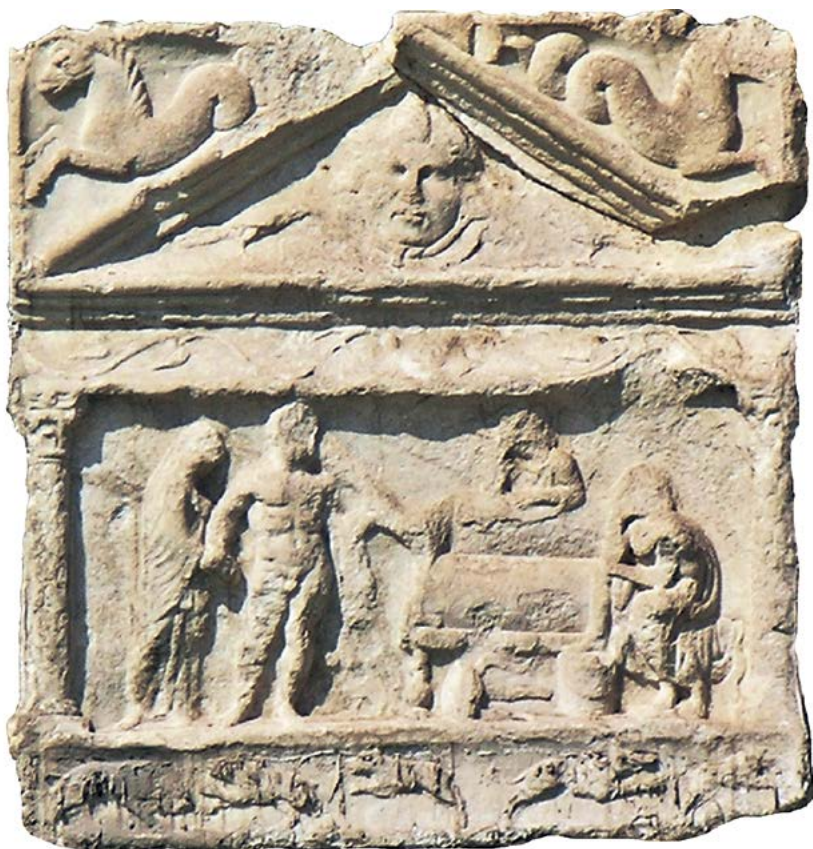


Fig. 5. Marble funerary stele with Heracles and Alcestis. *Spolia* built into Tower 3 of the Small Fortification in Smederevo fortress (photo: ©Boris Drajer).

6. Funerary limestone stele of S. Valerius Valens, the decurion of the municipium of *Viminacium* (Fig. 6).⁸

Dimensions: 243 cm × 87 cm × 29 cm

Provenance: *Viminacium*.

Location: Lapidarium of the National Museum in Belgrade, inv. 76.

Frieze: a dog chasing a bear and an indistinct animal, and a deer.

⁸ Pilipović 2008, n. 4; Pilipović 2022, n. 26, with previous bibliography; *EDH* 35771.

Fig. 6. Limestone funerary stele of *S. Valerius Valens* from *Viminacium*. Lapidarium of the National Museum in Belgrade, inv. 76 (photo: ©National Museum in Belgrade).





Fig. 7. Limestone funerary stele of *P. Aelius Victorinus* from Stojnik. Lapidarium of the National Museum in Belgrade, inv. 27 (photo: © National Museum in Belgrade).

7. Funerary limestone stele of *P. Aelius Victorinus*, veteran of the cohort II *Aurelia nova* (Fig. 7).⁹

Dimensions: 203 cm × 87 cm × 33 cm

Provenance: Stojnik, Kosmaj mountain, south of Belgrade.

Location: Lapidarium of the National Museum in Belgrade, inv. 27.

Frieze: a deer, a wild boar, and two indistinct animals.

⁹ Pilipović 2008, n. 7; Нинковић 2019, n. 27; Gavrilović-Vitas & Anđelković-Grašar 2021, III–125.

Norico–Pannonian monuments with a hunting scene

Friezes decorated with hunting scenes appear most often on very different Norico–Pannonian monuments, funerary stelae, and *aediculae*. In many cases, it is difficult to determine exactly what kind of monument it is, due to fragmentary preservation. Funerary stelae were actually originally geometrical, simplified *aedicula* types of tombs, so it is very difficult to determine to which type such very poorly preserved fragments with a hunting scene belong, given that they repeat the same iconographic scheme. A frieze with a hunting scene can most often be seen in Noricum,¹⁰ in Upper Pannonia,¹¹ as well as in Lower Pannonia.¹² Examples from Noricum and Upper Pannonia were mainly made from marble. Although there is great diversity in the choice and combination of the animals themselves, only two iconographic types can be observed, depending on whether or not a hunter is also depicted. In the first iconographic type the hunter chases wild animals, while in the second type only the animals are depicted.

The first type of frieze, with a hunter chasing wild animals

The first type of frieze with a hunter present was less prevalent, and was more characteristic for monuments from Noricum. It only appeared on one Upper Moesian stele from *Viminacium* (Fig. 1). An analogous scene to that in *Viminacium*, in which the hunter holds a knife, can be seen on the damaged frieze of the stele of Iulius Asclepiades from *Sirmium*, from Lower Pannonia, which dates from the same period, the end of the sec-

¹⁰ Fragments from a frieze with a hunter: marble – *Lupa* 505, 1249, 1316, 4694, 4826; limestone – *Lupa* 342, 368. Frieze with animals: marble stelae – *Lupa* 1182, 1220, 1232, 1362, 1418, 1612, 1649, 3107, 3663, 3618, 4129, 6071; aedicula tombs – *Lupa* 11199; fragments in marble – *Lupa* 524, 526, 943, 1085, 1253, 1295, 1481, 1488, 1713, 1954, 1963, 2162, 2165, 2647, 3241, 4384, 4569, 4645, 4938, 5792, 6185, 16731, 30710; limestone stelae – *Lupa* 482, 484; limestone fragments – *Lupa* 406, 407, 525.

¹¹ Stele with a frieze with a hunter: marble – *Lupa* 685, 3342; limestone – *Lupa* 16676. Frieze with animals: marble stelae – *Lupa*: 422, 630, 1455, 1456, 1702, 22761, 3081, 3089, 3103, 3104, 3106, 3342, 3366, 3383, 3777, 3784; marble fragments – *Lupa* 5312; limestone stelae – *Lupa* 429, 454, 455, 1867, 1901, 3082, 3314.

¹² Stele with a frieze with a hunter: marble – *Lupa* 4005. Fragments with a hunter: limestone – *Lupa* 3219, 4015, 13129. Frieze with animals: limestone stelae – *Lupa* 644, 649, 2839, 3593, 5999; limestone fragments – *Lupa*: 394, 3937, 3982, 3983, 4043, 5573.

ond century or the beginning of the third century CE.¹³ A standing figure of a hunter with different weapons – with a spear, bow and arrow – or leading a dog on a lead can also be seen on four fragments from Noricum.¹⁴ A hunter with a spear, on a horse, appears on a fragment from Noricum,¹⁵ and on a stele from *Savaria*, Upper Pannonia.¹⁶ The fact that the action is taking place in bucolic surroundings is also indicated by depictions of trees, common in these scenes. The same type of tree among animals, as on the stele from *Viminacium* (Fig. 1), appears in two fragments: a fragment of a marble *aedicula* tomb from Noricum, today's Bad Waltersdorf, from the first half of the third century; and a limestone fragment from *Intercisa*, Lower Pannonia.¹⁷

The second type of frieze, with running animals

The second type of frieze, for which the name *Zwischenstreif animalistica*¹⁸ is more appropriate, shows running animals. This type is more prevalent on Upper Moesian stelae (Fig. 2–7). Running animals can face the same direction (Fig. 3), one animal can be placed in the opposite direction (Fig. 2, 6), or the animals can be turned in two directions in relation to the centre of the frieze (Fig. 4–5). Most often, a dog is shown chasing a rabbit (Fig. 2–4). There are many examples of this pair of animals from Noricum¹⁹ and Upper Pannonia.²⁰ Less often, the dog is shown chasing other animals – a horse (Fig. 3), or a bear (Fig. 4). A bear and a wild boar are, in addition to a *Viminacium* stele (Fig. 2), shown on the frieze of a stele made of marble from Gummern²¹ (bull, bear, lion, and wild boar), found in *Flavia Solva*, in Noricum.²² The lion is shown with various animals, most often with a deer, such as the one on a stele from *Viminacium*

¹³ *Lupa* 4005.

¹⁴ *Lupa* 1249, 1316, 4694, 15840.

¹⁵ *Lupa* 368.

¹⁶ *Lupa* 685.

¹⁷ *Lupa* 394.

¹⁸ Schober 1923, 157; Bianchi 1985, 122–123; Bianchi 2016, 361.

¹⁹ Stele: *Lupa* 482, 1612, 3107, 3618, 3663, 4129; fragments that may have formed part of an *aedicula* tomb: *Lupa* 406, 482, 524, 1253, 1488, 16731, 1963, 4645.

²⁰ *Lupa* 454, 630, 685 (stele with hunter), 1455, 1456, 3104, 3386, 3784.

²¹ Djurić 2019, 18, note 106.

²² *Lupa* 1182.

(Fig. 1). A frieze with a hunter and a lion, as on a stele from *Viminacium*, is found on the already cited stele from *Sirmium*.²³ The lion and deer are also depicted on one first-century stele from Upper Pannonia, on a fragment from *Intercisa*, and on a stele from *Aquincum*, Lower Pannonia.²⁴

Hunting scenes on Upper Moesian marble stelae

Five funerary stelae from the Limes in Upper Moesia, more precisely from *Viminacium*, are made of marble from East-Alpine quarries (Fig. 1–5).²⁵ Research has already shown how stelae, as semi-finished products from these quarries and workshops, were distributed along river courses all the way to *Viminacium*.²⁶ The role of Gummern, the most important marble quarry, is evident from the large number of monuments and architectural elements it produced in the period from the first to the fourth century CE.²⁷ All other East-Alpine white marble quarries nevertheless had a local or regional role.²⁸ Most probably, these stelae from *Viminacium* were made of marble from Gummern, which has already been confirmed by petrographic analysis for one stele, now housed in the Museum of Vojvodina in Novi Sad.²⁹

The stelae from *Viminacium*, which are the subject of this research, repeat the typology as well as the iconographic scheme of the Norico–Pannonian ones.³⁰ It is known that they arrived in *Viminacium* as sketched or semi-finished products from East-Alpine quarries and workshops. As far as can be seen from the above-mentioned Upper Moesian and Norico–Pannonian examples of a frieze with a hunting scene, the iconographic scheme was fundamentally the same, but it is almost impossible to see identical examples. There is a very wide range of different combinations of animals depicted within the canonical framework of basic iconographic rules. An extremely diverse offer and rare repetition of identical icono-

²³ *Lupa* 4005.

²⁴ *Lupa* 3983, 2839.

²⁵ I would like to thank Prof. Bojan Djurić for this information.

²⁶ Djurić 2005; Djurić & Müller 2009, 121; Djurić 2016; Djurić, Kele & Rižnar 2018, 471; Djurić 2019; Pilipović 2022.

²⁷ Müller 2007; Djurić 2019, 16.

²⁸ Djurić 2019, 16.

²⁹ Djurić 2019, 18, 20 fig. 17; Pilipović 2022, cat. 35, 38–40, 80–83.

³⁰ Pilipović 2022.

graphic hunting schemes on stelae from these workshops and, on the other hand, the appearance of other identical secondary motifs in the decoration of Norico–Pannonian and Upper Moesian stelae, raises the question of where these hunting scenes could have been made.

Some marble stelae from *Viminacium* have identical secondary decorations to those found on Norico–Pannonian stelae. An exceptional example is one single-storey *Viminacium* stele³¹ which completely repeats the motif of the decoration of a stele from Noricum, from Miklavž on the right bank of the river Drava, near Maribor in Slovenia.³² Both are single-storey stelae with a tympanum and acroteria, with a wide architrave beam/frieze beneath them. The tympanum of both stelae bears an eagle, flanked by ivy leaves on both sides. In the centre of the frieze on both stelae there is a crater, flanked by griffins turned towards it, three ivy leaves are shown on the far side of each griffin. Bojan Djurić identified a group of single-storey stelae to which this stele from *Viminacium* and the stele from Guberevac belong, and linked them to the same workshop operating most probably in *Flavia Solva*.³³ He assumed that the stelae from *Viminacium* and Guberevac arrived in Upper Mesia decorated and fully finished with only the inscription missing. This example indicates the possibility that the decoration of friezes with hunting scenes on two-storey stelae might also have been produced before the semi-finished funerary stele was delivered to *Viminacium*.

The hunting scene was not characteristic of friezes on limestone Upper Moesian stelae – there are only two stelae with this motif (Fig. 6–7). Likewise, all Upper Moesian two-storey stelae made of East-Alpine marble (apart from one damaged stele, for which it is difficult to assume the original appearance) have a frieze with a hunting scene. Given that Bojan Djurić pointed out that the absence of identical frieze decoration on single-storey stelae was a consequence of the existence of a rich variant of the basic form intended for distant clients, one may presume the same for two-storey stelae.³⁴ The hunting scene friezes on Upper Moesian stelae may have been completed in East-Alpine workshops.

³¹ Pilipović 2022, n. 23; *Lupa* 5416.

³² *Lupa* 1234.

³³ Djurić 2016, 178–179: stele from *Viminacium* (*Lupa* 5416), and stele from Guberevac (IMS I 129).

³⁴ Djurić 2016, 176.

Hunting scenes on Upper Moesian limestone stelae

A hunting scene decorates only two Upper Moesian funerary stelae made of limestone, probably from some local or regional quarry (Fig. 6–7). Both stelae date to the same period as the marble ones from Upper Moesia, the end of the second or the beginning of the third century CE.

The general design of these stelae has followed the model determined in the East-Alpine workshops, while in their decoration one can see the intermixing of local influences. The acceptance of a hunting scene as a decorative motif by local workshops in *Viminacium* is very understandable, bearing in mind that, in this period, a significant number of marble funerary stelae from East-Alpine quarries with this motif were imported for well-to-do residents. On the other hand, Stojnik, from where the second limestone stele originated (Fig. 7), is located in a mountainous area south of Belgrade.³⁵ Most stelae from this mining area were made in local workshops, but it is confirmed that one stele from Guberevac was made of marble from Gummern.³⁶

These two Upper Moesian limestone stelae were made from local limestone in local workshops, adhering to the Norico–Pannonian model, but it is possible that the choice of motif in the central relief field depended on local tradition. The choice of theme of Hercules and Hesione in the central field on the stele from Stojnik (Fig. 7), according to some research, may have been connected with the important role which Hercules had as protector of mines in this area.³⁷ The stele was erected for a veteran of the cohort II *Aurelia Nova*, a cohort that was created at the end of the second century with the intention of protecting this nearby mining area (Guberevac, Sopot, Stojnik).³⁸ Also, the motif of a crater with vines in the central field of the “Decurion stele” from *Viminacium* (Fig. 6) is not often seen in the central field of Norico–Pannonian stelae.³⁹ Nevertheless, the appearance of a frieze with a hunting scene on a stele is an important confirmation that the choice of decoration in local workshops

³⁵ IMS I 120.

³⁶ Djurić 2005, 175; Djurić 2019, 18, fut. 106; IMS I 129.

³⁷ Besides the different titles, Hercules could have been worshipped as *Custos, Salutifer/Alexikakos* – as a protector of mines. Dušanić 1999, 133, n. 32.

³⁸ Dušanić 1976, 105; Gavrilović-Vitas & Anđelković-Grašar 2021, 113.

³⁹ Pilipović 2022, 84.

did not just depend on local tradition, but on a fashion which influenced the taste of the local inhabitants, a fashion that came from East-Alpine workshops.

The oldest known examples of friezes with a hunting scene

Upper Moesian funerary stelae with a hunting scene date from the second half of the second century to the beginning of the third century, while Norico–Pannonian ones date from the middle of the first century and became popular during the second century. This type of frieze first appeared on a stele from the period of Nero's reign (Fig. 8), from today's Walbersdorf, Upper Pannonia.⁴⁰ It was confirmed that the stele is made of Gummern marble.⁴¹ Together with another stele from Walbersdorf,⁴² it seems that it was the model for some stelae found in Dalj (*Teutoburgium*, territory of *Mursa*) in Lower Pannonia, which were made of the same type of marble, but somewhat later, in the Flavian period.⁴³ The funerary stele from Walbersdorf (Fig. 8) was made of Gummern marble as early as the middle of the first century, and after that the motif of the hunt, as far as we can see, became one of the more popular motifs of frieze decoration during the second century, not just in Norico–Pannonian funerary stelae but in those in Upper Moesia as well, most probably made of the same Gummern marble. There is one more Upper Pannonian stele from the middle of the first century, today in the Museum in Sopron, but this stele was made of limestone.⁴⁴ On this stele there is no framed frieze, but on a wide band, between a semi-circular tympanum and the epigraphic field, a lion chasing a deer is depicted.

Friezes with a hunting scene on funerary stelae from northern Italy and the Adriatic coast

A frieze with a hunting scene appears on several preserved stelae from northern Italy and the Adriatic coast, dating to the second half of the first

⁴⁰ Bianchi 2016, 363–364; *Lupa* 422.

⁴¹ Djurić 2019, 19, fig 15.

⁴² *Lupa* 423.

⁴³ Djurić, Müller & Filipović 2010, 10, note 4; Migotti 2016, 173–174, cat. 4–5.

⁴⁴ *Lupa* 455.

and the second century CE. Two stelae with a hunting scene are from Piedmont (*regio XI Transpadana*) and Liguria (*regio IX*); they are housed in the Archaeological Museum in Torino. On the frieze on the stele of L. Domitius Virilis,⁴⁵ Eros is chasing a lion, which in turn is following a horse (Fig. 9).⁴⁶ On the frieze of the stele of Q. Veiquasius Optatus⁴⁷ there are two hunters, four animals, and one tree (Fig. 10).⁴⁸ A scene of the transport of goods on this stele might indicate that Q. Veiquasius Optatus was a merchant.⁴⁹

The next examples hail from the Adriatic coast. A fragmentarily preserved frieze with two animals turned towards the right can be recognised on a stele from Gazzo Veronese, Verona province (*regio X Venetia et Histria*).⁵⁰ Two funerary stelae come from central Italy (*regio V Picenum*). The stele of T. Sillius Priscus,⁵¹ from the second half of the first century to the first half of the second centu-

⁴⁵ CIL V 7046.

⁴⁶ Mercado & Paci 1998, 134, n. 66; Gabucci 2018, fig. 20; *Lupa* 32812.

⁴⁷ CIL V 7682.

⁴⁸ Mercado & Paci 1998, n. 45; *Lupa* 32813.

⁴⁹ Reddé 1978, 46.

⁵⁰ Bassi 1997, 30–31, fig. 2 and fig. 3.

⁵¹ CIL IX 5450.



Fig. 8. Marble funerary stele of *Petronius Rufus* from Walbersdorf. Soproni Museum, inv. 55.200.3 (according to: Luca Bianchi 2016, 364, fig. 3).



Fig. 9. Marble funerary stele of *L. Domitius Virilis* from *Augusta Taurinorum*. Archaeological Museum in Torino, inv. 379 (photo: ©MiC – Musei Reali, Museo di Antichità, Torino).

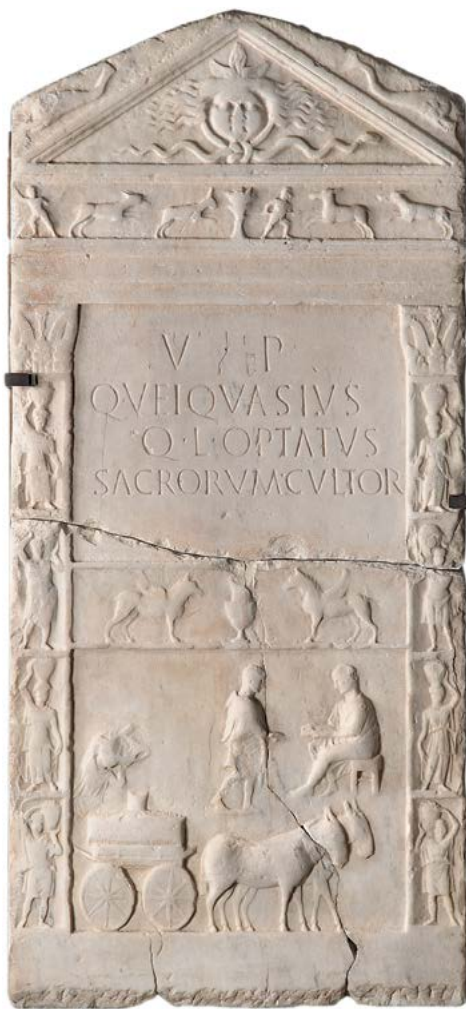


Fig. 10. Marble funerary stele of *Q. Vei-quasius Optatus* from *Augusta Bagiennorum*. Archaeological Museum in Torino, inv. 450 (photo: ©MiC – Musei Reali, Museo di Antichità, Torino).

ry, is from *Falerio Picenus*, today's Falerone in the Marche region.⁵² This stele was not typologically inspired by *aedicula* tombs. The upper part shows three free fields, a central semi-circular one with a relief, and two lateral ones in the form of a rosette. Between the fronton and the inscription field there is a frieze with a running lion and lioness turned to the left. The other stele is from *Tolentinum*, today's Tolentino, and dates to the second century (EDH 5066). It is so poorly preserved – only the outlines of two animals can be seen above the inscription field, so the existence of a frieze with a hunting scene is only presumed.⁵³

In Cisalpine Gaul, *aedicula* tombs were very common but, so far, research has shown that funerary stelae with this motif have been only sporadically preserved. The question, to which available data cannot provide a precise answer, is whether the scheme of a frieze with a hunting scene could originally have been found on them.

The origin of motifs, prevalence, and routes of influence

A frieze with a hunting scene is significantly characteristic of Norico–Pannonian stelae and *aedicula* tombs, although it also sporadically appears on stelae in northern Italy and the Adriatic coast. The spread of northern Italian influences – especially those from *Aquileia* – on the neighbouring provinces of Noricum and Upper Pannonia has attracted special attention of the researcher.⁵⁴ Although these influences had a decisive role in the Romanisation of the Norico–Pannonian area, they were not uniform, and might have been reduced by the strengthening of certain regional characteristics. However, what is evident is that friezes with a hunting scene were a local innovation of Norico–Pannonian character, where this motif developed, and from whence its influence spread all the way to the Upper Moesian Limes.⁵⁵

The strong connection between the East-Alpine and Norico–Pannonian areas is very well illustrated in numerous epitaphs, of which the

⁵² Cristofori 2004, 570, n. 9; Paci, Marengo & Antolini 2013, 128, 130 fig. 7.

⁵³ Paci, Marengo & Antolini 2013, 128.

⁵⁴ Piccottini 1976 141–151; Verzář Bass 1985, 183–208; Gabucci & Mennella 2003, 317–338; Cigaina 2015, 28; Bianchi 2016, 363; Gabucci 2018, 27–56.

⁵⁵ Bianchi 2016, 363; Pilipović 2019; Pilipović 2022.

most eloquent epitaph is that of L. Tettienus Vitalis.⁵⁶ This merchant was born in *Aquileia*, grew up in *Iulia Emona*, and after a difficult life and work spent between the Adriatic and the rivers Po and Sava, he died in *Augusta Taurinorum*.⁵⁷ Three towns mentioned in this inscription, besides being key places in the life of L. Tettienus Vitalis himself, were fundamental points on the exceptionally important route which, via the river Po, connected *Augusta Taurinorum*, today's Torino⁵⁸ (indirectly also the interior of Gaul with its Alpine western area), with the Adriatic, and with *Aquileia*; from here the traders' route continued overland along the coast right to *Nauportus*, today's Vrhnika in Slovenia, on the left bank of the Ljubljana,⁵⁹ to (via the river) continue to the town of *Emona* and the river Sava, along the Danube, to the Black Sea.⁶⁰ After the conquest of Dacia, these connections between *Aquileia* and Pannonian towns were intensified and obtained direct economic significance.⁶¹ One of the exceptionally important segments of economic, cultural, and social interaction between northern Italy, via the East-Alpine quarries and workshops and the Upper Moesian Limes, is manifested, as we can see, in these funerary stelae with a hunting frieze.

A frieze with a hunting scene appears on seven Upper Moesian funerary stelae, five made of marble from East-Alpine quarries, and two of local limestone. Although there are examples of funerary stelae which originated from northern Italy and the Adriatic coast, friezes with a hunting scene were a local invention of the East-Alpine quarries and workshops, where it was very popular in the decoration of *aedicula* tombs and funerary stelae, especially in the second century CE, and from whence

⁵⁶ CIL V 7127; CIL V 7047.

⁵⁷ Gabucci & Mennella 2003, 317–338.

⁵⁸ According to Pliny the Elder (NH 3.17.123), the river Po becomes navigable at the level of *Augusta Taurinorum*, Gabucci & Mennella 2003, 331.

⁵⁹ Gabucci & Mennella 2003, 331.

⁶⁰ The commercial route between *Aquileia* and the *Orient* is described by Strabo (4.6.10 and 7.5.2). For the trade connections between Transpadana and the Pannonian regions via *Aquileia* and *Emona*, see Zaccaria 1989, 22–33; Horvat 2008, 444–453; Gabucci 2018, note 154. For settlements and communications along the routes of *Emona*–*Siscia*–*Sirmium* (166–188), *Aquileia*–*Singidunum* (189–231), *Poetovio*–*Siscia* (232–235), *Taurunum*–*Mursa* (236–247), and the route along the the Upper Moesian bank of the Danube (247–287), see Петровић 2015.

⁶¹ Gabucci 2018, note 158.

the semi-finished marble stelae were distributed along river courses all the way to *Viminacium*.

Absence of an identical iconographic scheme of hunting scenes on Norico–Pannonian and Upper Moesian stelae was most probably the consequence of the existence of a rich variant of the basic form intended for distant clients. The appearance of identical decoration on friezes on Norico–Pannonian and Upper Moesian single-storey stelae, and the fact that the hunting scene was not characteristic of limestone Upper Moesian stelae, could indicate the possibility that friezes with hunting scenes had already been created in East-Alpine workshops. Upper Moesian stone cutters then accepted and recreated this motif on limestone stelae in local workshops in order to satisfy well-to-do clients, such as the Decurion of *Viminacium* or a veteran of the II *Aurelia Nova* cohort, whose taste was formed exactly on the models of imported luxurious marble stelae of that time.

Abbreviations

- CIL – Momsen, T. ed. 1873–. *Corpus Inscriptionum Latinarum*. Berlin: Reimer.
- EDH – *Epigraphische Datenbank Heidelberg* (<https://edh-www.adw.uni-heidelberg.de/> 20. II. 2025).
- IMS – Mirković, M. and S. Dušanić, eds. 1976. *Inscriptions de la Mésie Supérieure I: Singidunum et le nord-ouest de la province*. Beograd: Centre d'études épigraphiques et numismatiques de la Faculté de philosophie de l'Université de Beograd.
- Lupa – Harl, F. and O. Harl. *Bilddatenbank zu Steindenkmälern* (<http://lupa.at/> 20. II. 2025).
- Plin. NH = Pliny. 1942. *Natural History, Volume II: Books 3–7*. Translated by H. Rackham. Cambridge, MA: Harvard University Press.

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Snežana Ferjančić*

University of Belgrade

Faculty of Philosophy

Belgrade, Serbia

A Boundary Stone From Beočin Reconsidered

Abstract: The aim of this paper would be to re-examine one epigraphic monument from the territory of Sirmium, one of the most important and prosperous towns of Roman Pannonia. The slab which marked the boundary of the estate of Tiberius Claudius Priscus, prefect of the *ala I civium Romanorum*, was found in Beočin, in the north-eastern part of the Sirmian territory. It contains valuable information on the topography and history of Sirmium and south-eastern Pannonia. It reveals the indigenous name of a *vicus* in the town's territory. The village of *Iosista* was probably situated east of Beočin, on the site Marin Do. The boundary stone sheds some light on the military history of Pannonia. Its find spot implies that the fortress of the *ala I civium Romanorum* was located on the Sirmian section of the Danubian *limes*. The unit's commander Tiberius Claudius Priscus might be identified with a homonymous equestrian officer from Ephesus in the province of Asia. The prefecture in the *ala I civium Romanorum* would be his *militia tertia*.

Key words: Sirmium, Tiberius Claudius Priscus, *ala I civium Romanorum*, Beočin, *Iosista*

Sirmium was one of the most important and prosperous towns of the Danubian provinces of the Roman Empire. It was situated in the south-eastern corner of Pannonia and, from 106 AD, Pannonia Inferior. Sirmium was conquered by the Romans either during Octavian's Illyrian war (35–33 BC), or Tiberius' Pannonian campaign (12–9 BC).¹ It became the centre of the tribal community (*civitas peregrina*) of Amantini and

* sferjanc@f.bg.ac.rs

¹ Mirković 2004, 147; Mirković 2017, 19–21.

Sirmienses.² One of the Flavian emperors founded a colony in Sirmium, but his identity is still a matter of debate. Some scholars have opted for Vespasian,³ and others for Domitian.⁴ The territory of Sirmium and the town itself have yielded numerous epigraphic monuments which contain valuable information on various aspects of the area's history. Recent work on a new edition of Sirmian inscriptions has prompted us to re-examine the boundary stone from Beočin.⁵

The monument is kept in the Archaeological Museum in Zagreb, Croatia (inv. no. 750). It was found in the spring of 1909 beside the cement factory, during the construction of a locomotive shelter. The monument was first published by J. Brunšmid a year after its discovery.⁶

The slab, made of sandstone, is 129 cm high, 38 cm wide, and 10 cm thick. Its upper and lateral sides have rough edges, and the lower part is somewhat narrower than the rest of the monument. The slab contains two inscriptions on its front and back sides, respectively. The letters are of irregular shape and shallowly cut. In the inscription on the front side of the slab their height is 8 cm in the first line and 5 cm in lines 2–6, while the letters on the back side of the slab measure 8.5 cm.⁷ Round *hederae* are visible between all the words in lines 2–6.

The text on the front side of the slab runs:

Age(r)
vici Iosi-
sta ads-
ig(natus) Ti(iberio) Cl(audio) Pr-
5 isco pr(a)ef(ecto)
alae I c(ivium) R(omanorum).

² Грдић 2014, 225.

³ E.g. Kovács 2014, 74; Mócsy 1974, 112; Mrozewicz 2015, 152–153; Šašel 1983, 81.

⁴ E.g. Alföldy 1959, 122; Assmann 1905, 108; Dušanić 1967, 70; Mirković 2004, 147–148; Mirković 2017, 28–29; Syme 1968, 103.

⁵ Beočin was situated on the territory of Roman Sirmium. The boundary with the neighbouring town of Bassianae ran east of it, presumably between Hopovo and Krušedol, and then Jarak and Petrovci (cf. Mirković 2004, 148; Milin 2004, 253).

⁶ Brunšmid 1910/1911, 128, no. 750 (= Domaszewski 1911, 75; AE 1911, 237; Mirković 1971, 81–82, no. 79; Mirković 2017, 219–220, no. 249; ILJug 3013).

⁷ Measures were taken in March 2022 by Olga Pelcer Vujačić (Historical Institute of Montenegro), with the permission of the Archaeological Museum in Zagreb.

The text on the back side of the slab runs:

C(*aput*) a(*gri*) e(*xcepti*).

Judging by the palaeographic features of the inscriptions, the boundary stone from Beočin was erected in the first century AD. This is implied by the following letters: E and L with short horizontal strokes; G with the extremely short second stroke; open P and R; T with a short transversal bar. These forms are common in inscriptions from the neighbouring province of Moesia Superior dated to the first century AD.⁸

The boundary stone from Beočin provides valuable information on the history of Sirmium and its territory. The inscription on its front side shows that the land belonging to a *vicus* in the Sirmian *ager* was assigned to an officer of the Roman army. The village was called *Iosista* and it must have been located at Beočin or its vicinity. Archaeological evidence points to the site of Marin Do on the right bank of the stream called Dumbovački potok, east of Beočin. The finds include indigenous local and imported pottery, Italian glassware, *fibulae*, and a coin of Nero Drusus, dated to 23–24 AD. Remains of elliptical pit houses with open hearths are connected to the earliest phase of the settlement, that is, the period between the middle of the first century AD and the first half of the second century AD. The site has also yielded architectural remains from Late Antiquity. A watch-tower was built at the end of the third century or the beginning of the fourth century AD, while a *villa rustica* is dated to the fourth century.⁹ The name of the village *Iosista* dates to pre-Roman times and should be considered as an indigenous Pannonian toponym. It contains the suffix *-st-* attested in several Pannonian place-names (*Lepavista*, *Ramista*, *Segesta*, *Sinista*).¹⁰ A similar toponym is attested on the epitaph of an *eques singularis* from Rome. Ulpius Cocceius was born in a village of the *pagus Iovista* on the territory of Aquae Balissae in Pannonia Superior.¹¹ Other villages on the territory of Sirmium are attested in epigraph-

⁸ Петровић 1974, 112–120.

⁹ Biró 2017, 327–328, no. 9; Dautova Ruševljan & Vujović 2006, 64; Đorđević 2007, 66–67; Ilić 2020, 73–85.

¹⁰ Anreiter 2001, 73, 189. Грдић 2104, 304 also lists *Iosista* among *vici* with native names in the Pannonian provinces. Mayer 1957, 173 considered *Iosista* an Illyrian toponym.

¹¹ CIL VI 3297. On *Iovista* see: Anreiter 2001, 72–75.

ic evidence from Rome and the provinces. *Budalia* in the *pagus Martius* is mentioned in the epitaph of Aurelius Verus, soldier of the sixth praetorian cohort. The monument, erected by his fellow soldiers, was found in Rome and dated to the second half of the second century AD, or to the third century AD.¹² *Budalia* is also mentioned as a road-station in Roman itineraries.¹³ It was situated at the site of Kamarište in the district of the village of Martinci, to the west of Sremska Mitrovica.¹⁴ The name of the village recorded in the funerary inscription of the gladiator Maximinus, who died in Thessalonica, is partially preserved as *Iusci*[- -]. The monument is dated to the first half of the fourth century AD.¹⁵ The location of the village is not determined. Another Sirmian *vicus* might have been attested in an epitaph from Aquileia, dating from the third century AD. The home of Aurelius Clarianus, soldier of the legion *I Adiutrix*, was recorded in lines 7–9. According to A. Dobó the damaged text should be restored in the following way: *nat(ione) [Pannonia i]n[f]e/rio[re pago] Mar(tio) / vic[o . . . d]iano*.¹⁶ If we accept his proposal, the name of the village located in *pagus Martius* ended in *-dianum/dianus*. One should note, however, that the reading and restoration of lines 7–9 is not certain. Th. Mommsen proposed the following reconstruction: *nat(o) [in Moesia i]nferio[re reg(ione)] Mar(cianopolitano) vic[o . . .]diano*.¹⁷

The land of the village of Iosista was granted to Tiberius Claudius Priscus, prefect of the *ala I civium Romanorum*. The mention of this unit allows a more precise dating of the boundary stone from Beočin. The *ala I civium Romanorum* was garrisoned in Pannonia in the second half of the first century AD, since the reign of Vespasian or possibly earlier.¹⁸ Its name is recorded on military diplomas issued in 80,¹⁹ 83,²⁰ 84,²¹ and 85

¹² CIL VI 37213 = ILS 2044. For the dating see Ricci 1993, 184, P29.

¹³ It. Ant. 268, 1; It. Burd. 563, 6.

¹⁴ Biró 2107, 349–350, no. 57; Đorđević 2007, 35.

¹⁵ AE 2006, 1290.

¹⁶ Dobó 1975, 44, no. 155. Cf. Biró 2917, 322, no. 21; Mirković 2004, 148; Pavan 1979, 494; Zaccaria 1985, 108, no. 13.

¹⁷ CIL V 892. Cf. Calderini 1930, 350, no. 204; *InscrAqui* 2733.

¹⁸ On the *ala I civium Romanorum* in general see: Lőrincz 2001, 18, no. 8; Nagy 1956, 58–61; Strobel 1988, 109–110; Wagner 1938, 26–27.

¹⁹ CIL XVI 26; RMD 138.

²⁰ RMD 210.

²¹ CIL XVI 26.

AD.²² After participating in Trajan's campaigns against Decebalus, the ala *I civium Romanorum* stayed in the newly established province. It is attested as part of the Dacian garrison in 109²³ and 110 AD.²⁴ Considering the history of the ala *I civium Romanorum*, the boundary stone from Beočin might be dated to the second half of the first century AD. The exact location of the fortress of the ala *I civium Romanorum* in Pannonia is not known. Cornacum and Teutoburgium were suggested as possible sites by modern scholars.²⁵ Cornacum has not yielded epigraphic evidence pertaining to the ala *I civium Romanorum*. Inscriptions from Teutoburgium belong to the second and third century AD. The regiment's *sesquiplarius* Marcus Ulpus Similis and Ulpia Siscia erected a funerary stele for their brother Marcus Ulpus Super, decurio of the ala *I praetoria civium Romanorum* and former *summus curator* of the ala *I civium Romanorum*. The monument is dated to the later part of Trajan's reign.²⁶

The altar dedicated to Mithras by the veteran Aurelius Dubitatus is dated to ca. 200 AD.²⁷ Although the boundary stone from Beočin provides no clues to the exact location of the fortress of the ala *I civium Romanorum*, it implies that it should be sought in south-eastern Pannonia, on the section of the Danubian limes that belonged to the territory of Sirmium. Besides Cornacum (Sotin), mentioned above, possible sites could be Cuccium (Ilok), and Malata/Bononia (Banoštor). All three forts presumably date back to the reign of the Flavian dynasty.²⁸

According to A. von Domaszewski, Beočin lay on the territory of the Scordisci, and Tiberius Claudius Priscus was the prefect of their tribal community.²⁹ One should note that the find spot of the boundary stone was situated on the territory which belonged to the Amantini. *Civitas Scordischorum* encompassed the south-eastern corner of Pannonia, and the tribal community of Amantini and Sirmienses lay to the west of it. The boundary between the two *civitates* possibly ran east of mod-

²² CIL XVI 31.

²³ RMD 148.

²⁴ CIL XVI 57; AE 2011, 1981; AE 2018, 1981.

²⁵ Cornacum: Lőrincz 2001, 18, no. 8; Radman-Livaja 2012, 20; Wilkes 2005, 207, no. 46. Teutoburgium: Eadie 1977, 214; Tóth & Vékony 1970, 156–157.

²⁶ CIL III 3272 = 10257. For the dating see Lőrincz 2001, 183, no. 85.

²⁷ ILJug 3015. For the dating see Lőrincz 2001, 184, no. 88.

²⁸ Radman-Livaja 2012, 175–178.

²⁹ Domaszewski 1911, 75. Cf. Wagner 1938, 27.

ern-day Ruma,³⁰ leaving Beočin on the territory of the Amantini and Sirmienses. Although tribal communities in Pannonia and other provinces were governed by officers of the Roman army (legionary centurions and prefects of auxiliary regiments) during the first century AD,³¹ there is no proof that Priscus was in charge of a *civitas peregrina*.

An equestrian officer named Tiberius Claudius Priscus is mentioned in a honorific Greek inscription from Ephesus in the province of Asia. The monument was erected by Priscus' uncles in accordance with the decree of the Ephesian council and assembly.³² The inscription records two steps of Priscus' military career in inverse order. He was the prefect of the cohort *I sagittariorum* in Germania Superior, and tribune of the legion *X Fretensis* in Iudaea. According to the opinion of H. Devijver, Priscus held these posts under Vespasian.³³ S. Demougin, however, has proposed a Neronian date for Priscus' *militiae equestres*. She placed the command in Germania Superior to ca. 64 AD, and the beginning of the posting in Iudaea to 67 AD.³⁴ The Ephesian Tiberius Claudius Priscus might be identified with the homonymous officer who obtained the land of the village of Iosista. If we accept this hypothesis, the command over the ala *I civium Romanorum* in Pannonia should be regarded as his *militia tertia*. According to the pattern established after Claudius' reign, the career of an equestrian officer comprised the following stages: 1) command over a *cohors quingenaria*, or a *cohors voluntariorum*, or a *cohors ingenuorum civium Romanorum*; 2) tribunate in a legion, or command over a *cohors milliaria*; 3) command over an ala *quingenaria*.³⁵ Judging by the titles of its commanders, the ala *I civium Romanorum* was 500 men strong. Epigraphic evidence records the names of two prefects of the regiment: Tiberius Claudius Priscus and Lucius Aburnius Torquatus (he held the post under Trajan).³⁶ In the Roman army, *alae quingenariae* were under the command of *praefecti* chosen among men of equestrian rank.³⁷

³⁰ Грдић 2014, 223.

³¹ Domaszewski 1967, 107; Грдић 2014, 306–307; Mócsy 1974, 69; Wilkes 1969, 104, 287–289.

³² *IEphesos* 3032.

³³ *PME* C 173; Devijver 1989, 285, no. 34.

³⁴ Demougin 1992, 506–507, no. 606.

³⁵ Devijver 1989, 276–277.

³⁶ On Lucius Aburnius Torquatus see *PME* A 4.

³⁷ Le Bohec 1990, 27.

The *tres militiae* held by Tiberius Claudius Priscus would be: *praefectus cohortis I sagittariorum* in Germania Superior, *tribunus legionis X Fretensis* in Iudaea, *praefectus alae I civium Romanorum* in Pannonia.

The boundary stone from Beočin has been connected with veteran settlement on the territory of Sirmium and the foundation of the colony. In his book on the population of Pannonia until the Marcommanic wars of Marcus Aurelius, A. Mócsy stated that the monument should be taken as proof of a veteran *deductio*. He connected it to the foundation of the colony and the assignment of land plots.³⁸ M. Mirković regarded the boundary stone as proof that discharged auxiliaries received land-allotments on the territory of Sirmium. According to her opinion, Priscus could have been a veteran settled there after Domitian's Pannonian war.³⁹ This conjecture seems implausible, because Tiberius Claudius Priscus was not an ordinary auxiliary soldier who had been discharged after twenty five years of service. He was a high-ranking equestrian officer of the Roman army. The boundary stone from Beočin proves only that Tiberius Claudius Priscus received an extensive plot of land in the region of Sirmium. Whether this grant had anything to do with the foundation of the colony under the Flavians remains unclear. Priscus could have obtained the land by *viritim* allotment, as a sign of imperial favour.

The inscription on the back side of the monument from Beočin shows that it marked the boundary of Priscus' estate. The word *caput* is employed in the meaning denoting the border of a domain.⁴⁰ The expression *ager exceptus* is not recorded elsewhere in epigraphic evidence from Rome, Italy, or the provinces. It conveys the same meaning as *fundus exceptus*, attested in the works of Roman land-surveyors. This expression designated land extraneous to the surveyed and allocated area, which was exempt from the jurisdiction of the colony. The possessors of such estates had no fiscal or other obligations to the colony.⁴¹

The boundary stone from Beočin contains valuable information on the history and topography of Sirmium and Pannonia. It records the

³⁸ Mócsy 1959, 77. In the book on the history of Pannonia and Upper Moesia, however, he stated that the boundary stone from Beočin proved that land allotment in Sirmium continued after the Vespasianic *deductio* (Mócsy 1974, 114–115).

³⁹ Mirković 1971, 16; Mirković 2017, 29.

⁴⁰ TLL III, 411, l. 38–67.

⁴¹ Campbell 2000, 394, n. 40; Campbell 2006, 177; Dalla Rossa 2019, 107–III.

name of one of the villages on the territory of Sirmium. *Iosista* is certainly an indigenous Pannonian toponym that predates the Roman conquest. The village was situated near Beočin, at the site Marin Do on the right bank of the stream called Dumbovački potok. The boundary stone from Beočin provides information on the garrison of Pannonia in the second half of the first century AD. It implies that the fortress of the ala *I civium Romanorum* should be sought on the Sirmian section of the *limes*. The reasons that prompted the allotment of land of the village of Iosista to Tiberius Claudius Pricus, prefect of the ala *I civium Romanorum*, remain obscure. Was the grant connected to the foundation of the colony at Sirmium, or was it a *viritim* assignation? Tiberius Claudius Priscus might be the same person as the homonymous equestrian officer from Ephesus, whose career belongs to the second half of the first century AD. The command over the ala *I civium Romanorum* would be his *militia tertia*, the first two being the prefecture in the cohort *I sagittariorum* in Germania Superior, and tribunate in the legion *X Fretensis* in Iudaea.

Abbreviations

- AE – *L' année épigraphique*, 1888–. Paris.
- CIL – Mommsen, T. ed. 1873–. *Corpus Inscriptionum Latinarum*. Berlin: Reimer.
- It. Ant. – *Itinerarium Antonini*. Cuntz, O. 1929. *Itineraria Romana*, vol. 1: *Itineraria Antonini Augusti et Burdigalense*. Leipzig: Teubner.
- It. Burd. – *Itinerarium Burdigalense*. Cuntz, O. 1929. *Itineraria Romana*, vol. 1: *Itineraria Antonini Augusti et Burdigalense*. Leipzig: Teubner.
- IEphesos – Meriç, R., R. Merkelbach, J. Nollé and S. Şahin, eds. 1981. *Die Inschriften von Ephesos*, vol. VII. Bonn: Rudolf Habelt Verlag.
- ILJug – Šašel, A. and J. Šašel. *Inscriptiones Latinae quae in Iugoslavia inter annos MCMXL et MCMLX repertae et editae sunt*. Ljubljana: Slovenska akademija znanosti in umetnosti, 1963.
- ILJug – Šašel, A. and J. Šašel. *Inscriptiones Latinae quae in Iugoslavia inter annos MCMLX et MCMLXX repertae et editae sunt*. Ljubljana: Slovenska akademija znanosti in umetnosti, 1978.
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- ILS – Dessau, H. 1892–1916. *Inscriptiones Latinae Selectae*, vols. I–III. Berlin: Weidmann.
- InscrAqui – Brusin, G. B. 1991–1993. *Inscriptiones Aquileiae*, vols. I–III. Udine: Arti Grafiche Friulane.
- PME – Devijver, H. 1976–2001. *Prosopographia militiarum equestrium quae fuerunt ab Augusto ad Gallienum*, vols. I–VI (*Symbolae Facultatis Litterarum Lovaniensis*, Series A, vol. 3). Leuven: University Press.
- RMD – Roxan, M. M. and P. Holder. 1978–2006. *Roman Military Diplomas*, vols. I–V. London: Institute of Archaeology.
- TLL – Wölfflin, E. ed. 1900–. *Thesaurus Linguae Latinae*. Leipzig: Teubner.

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Dejan Radičević

*Department of Archaeology,
Faculty of Philosophy
University of Belgrade
Belgrade, Serbia*

The Mediaeval Necropolis in Prčevo near Klina (AP Kosovo and Metohija)

Abstract: This paper examines available information on mediaeval graves discovered by Nikola Tasić in 1974 during the investigation of prehistoric tumuli at the Boka site. Seven tumuli were systematically excavated, of which three showed evidence of secondary use for burial during the Middle Ages. These were the largest mounds in the necropolis, occupying central positions. Due to the lack of detailed data on burial practices and funerary customs, the analysis is based primarily on grave goods, which originate from female burials and consist of decorative items. The burial period is approximately dated to the eleventh–twelfth centuries, and the graves are attributed to the Slavic/Serbian population with a relatively developed material culture. The closest analogies are found in the surrounding regions – Kosovo and Metohija, central Serbia, and North Macedonia. Particular attention is given to objects of foreign origin, which indicate connections with a broader cultural milieu.

Keywords: Prčevo, Kosovo and Metohija, prehistoric tumuli, mediaeval necropolis, grave goods, jewelry, eleventh–twelfth century

Although his decades-long scholarly work was primarily focused on issues and problems of prehistoric archaeology, Nikola Tasić, during his field investigations of multilayered sites, also on several occasions excavated remains from the mediaeval period. One such site was Boka, located in the central part of the Autonomous Province of Kosovo and Metohija, near the village of Prčevo, about eight kilometers south-east of

* dradiccev@f.bg.ac.rs

Klina (Fig. 1). In geographical terms, the site belongs to the Prekoruplje region, a hilly-valley area in the basin of the Klina river, a left tributary of the White Drin, directly connected with the lowland part of Upper Metohija.¹ At this location, as part of a scientific research project focusing on the study of the Dardanians in Kosovo, and organised by the Department of Archaeology of the then Museum of Kosovo in Priština, in collaboration with the Institute of Balkan Studies of the Serbian Academy of Sciences and Arts (SANU), an initial survey was conducted, followed by the excavation of tumuli from the Bronze and Early Iron Age, during the period 1973–1975.²

The tumuli were distributed on a barren plateau below the Boka hill, on both sides of the road leading from the village of Svrha toward Iglarevo. They were erected on a completely bare, rocky terrain which, judging by the structure of the mounds, likely looked the same in prehistory. On a gently sloping ellipsoid-shaped area, approximately 900 meters in length and up to 300 meters in width, a total of 19 tumuli of various sizes were identified, almost invariably grouped in sets of three. During systematic excavations, seven tumuli were fully investigated, with at least one tumulus examined from each group (tumuli III, VIII, IX, X, XIII, XIV, and XVII).³ Following the isolated tumulus I, at the point where the barren plateau transitions into an oak forest, the first group consisted of three medium-sized tumuli (tumuli II, III, and IV), followed by a group of three heavily damaged tumuli intersected by the village road from Svrha to Iglarevo (tumuli V, VI, and VII). At a distance of about 80 meters was the next group, which included two exceptionally large and tall tumuli – the largest in the necropolis (tumuli IX and X) – and a smaller one adjacent to them (tumulus VIII). The subsequent group comprised three poorly defined tumuli, elongated and also damaged by the village road (tumuli XI, XII, and XIII). Connected to these, at a distance of 70 meters, was a new group of three well-preserved tu-

¹ Радовановић 2008, 9, 15.

² Тасић 1979, 89–99; Тасић 1998a, 198–204.

³ At the same time, test excavations were conducted in several stone formations in the surrounding area – small platforms made of circular arrangements of vertically placed limestone slabs. These were assumed to represent the foundations of not yet fully formed tumuli or the initial phase of their construction, without any human remains inside. However, since there were no relevant finds that could provide precise cultural or chronological determination, the investigations in this regard did not yield conclusive evidence (Тасић 1979, 89–92).



Fig. 1. The location of Prčevo on the map of the Republic of Serbia.

muli (tumuli XIV, XV, and XVI), and finally, the north-westernmost group of three tumuli (tumuli XVII, XVIII, and XIX), marking the beginning of the Boka hill slope.

In terms of dimensions, the tumuli varied greatly. The smallest had diameters under 10 meters, while the most numerous were those around 15 meters in diameter. Their height above the surrounding terrain ranged from 0.80 to 2 meters. The most prominent were tumuli IX and X, with diameters of 20–22 meters and heights of approximately 1.30 meters.⁴

Out of the seven excavated tumuli, it was established that three had been reused for burials in the mediaeval period. These were the largest tumuli in the necropolis (tumuli VIII, IX, and X), which also occupied central positions. Tumuli IX and X were classified as part of a group featuring a stone calotte (dome) without an outer stone ring, whereas tumulus VIII, in addition to a well-formed stone calotte, had an outer perimeter ring made of stone slabs. In some cases, the later mediaeval inhumations almost completely destroyed the prehistoric graves. This was especially true for tumuli VIII and IX, where prehistoric remains were found in secondary positions, while in tumulus X the damage to prehistoric graves was only partial.

According to the published data by N. Tasić, a total of 51 graves were documented in these three mounds.⁵ In tumulus VIII, prehistoric graves were destroyed by the intrusion of two mediaeval graves, one of which, based on the finds, was particularly significant: a female burial “with Tokaj-type earrings and bracelet-like armlets”.⁶ Displaced bones from the destroyed prehistoric graves and fragments of broken ceramic vessels were collected and deposited into a small pit next to the stone ring of the tumulus.

The extent of destruction of the prehistoric graves is most clearly illustrated in tumulus IX, where 44 mediaeval graves were dug within a 22-meter diameter circle. These graves were dug deeper than the level of

⁴ Тасић 1979, 88–89; Тасић 1998a, 200–204; Тасић 1998b, 560.

⁵ The literature presents differing data regarding the total number of excavated graves. For instance, A. Bačkalov states that N. Tasić discovered 45 graves in two tumuli (Бачкалов 1982, 46; Бачкалов 1998, 395), while V. Jovanović, referencing additional information received from A. Bačkalov, records that during the 1974 excavations, two graves were uncovered in tumulus no. 1, and 43 mediaeval graves in tumulus no. 9 (Јовановић 1988a, 27).

⁶ Тасић 1979, 91.

the prehistoric ones. Only a few finds – such as ceramic fragments and two iron spearheads – along with the presence of a central grave, which was buried deeper than all the other graves, both mediaeval and prehistoric, provide evidence of the original prehistoric function of this tumulus. In tumulus X, the prehistoric graves were significantly less disturbed, as only five mediaeval graves were dug into it. This likely occurred, according to Tasić, after the entire area of tumulus IX had been used for burials, prompting a shift to a new mound. For unknown reasons, the burial activity was soon discontinued, resulting in considerably less damage to this tumulus.⁷

The method of burial, orientation typical of Christian graves, and the grave goods clearly indicate that these are mediaeval burials. The objects found within them were initially housed in the then Museum of Kosovo and later transferred to the Museum in Priština, which is now temporarily based in Belgrade. They were first presented to the public during the celebration of the 138th anniversary of the National Museum in Belgrade, at the scholarly exhibition titled *Jewelry in Serbia from Medieval Necropolises (9th–15th Century)*. On that occasion, seven representative grave assemblages were exhibited (graves no. 1, 16, 13, 30, 37, 39, and 45), and the necropolis was roughly dated to the period between the tenth and twelfth centuries.⁸

Three years later, for the academic conference *Round Table on Scholarly Research of Kosovo*, held at the Serbian Academy of Sciences and Arts, a comprehensive overview of archaeological research on mediaeval monuments and sites in Kosovo and Metohija was compiled. Regarding the excavations near Prčevo, attention was drawn to the jewelry previously published by A. Bačkalov, and the dating he proposed was accepted.⁹

Bačkalov revisited the grave finds from Prčevo in 1998 for the exhibition *Archaeological Treasures of Kosovo and Metohija: From the Neolithic to the Early Middle Ages*, jointly organised by the Serbian Academy of Sciences and Arts and the Museum in Priština. The accompanying catalogue includes basic information about the necropolis, with a slightly broader dating (tenth–thirteenth century) than previously proposed.¹⁰

⁷ Tasić 1979, 92.

⁸ Tasić 1982, 46–47, cat. no. 122–141.

⁹ Jovanović 1988a, 27, fig. 22.

¹⁰ From tumulus VIII (segment III), grave no. 45 is cited, while from tumulus IX,

As for the grave goods themselves, beyond the mentioned exhibition catalogues, some individual items have been discussed separately in scholarly literature as parts of studies dedicated to specific types of jewelry,¹¹ or within broader overviews of mediaeval jewelry in Serbia and the surrounding regions.¹²

Based on available data, the finds can be classified according to grave assemblages in the following manner:

Grave no. 1, Tumulus IX:

Two rings were discovered – one made of bronze, 1.9 cm in diameter, cast with a square-shaped bezel decorated with incised crosshatch lines (Fig. 2/1), and the other made of silver, a twisted wire ring, 2 cm in diameter (Fig. 2/2).



Fig. 2. Grave No. 1 (photo. Museum in Priština – with relocated seat).

the following are noted: grave no. 13 in segment III, grave no. 1 in segment IV, and graves nos. 37 and 39 in segment I. As catalogued items with specific catalogue numbers, the following artefacts are illustrated: two rings from grave no. 1; two rings, a bracelet, a double pendant, and appliques from grave no. 13; a ring from grave no. 37; a bracelet from grave no. 39; and earrings and a bracelet from grave no. 45 (Бачкалов 1998, cat. nos. 396–405).

¹¹ Марјановић-Вујовић 1986, 222–224, fig. 2 and 5/2; Јовановић 1988b, 265, fig. 15; Петровић 2001.

¹² Bikić 2010, 73, 84, 103, 106, 110; Радичевић & Црнчевић 2016, 426–427, п. 51.

Grave no. 13, Tumulus IX:

A pair of silver earrings with four globules, crafted in filigree technique, 5 cm in height and 2.3 cm in diameter; and three bronze rings. The first cast ring has a truncated pyramid-shaped bezel with emphasised shoulders, 1.9 cm in diameter. The shank is smooth on the inside and rounded on the outside. Triangular extensions are present on the sides of the bezel, and two horizontal lines are incised on both sides of the ring (Fig. 3/1). The second is a band ring made from thin bronze sheet, flat and undecorated, 1.9 cm in diameter. The ends are joined beneath an additional soldered circular setting holding a yellow-white glass inlay (Fig. 3/2). The third features a conical bezel adorned with filigree and granulation, 1.9 cm in diameter (Fig. 3/3). The bronze bracelet is band-shaped with a hinge clasp, decorated with stamped ornamentation, 6 cm in diameter and 1 cm wide (Fig. 3/4). A double pendant (Fig. 3/5) and appliqués, made of gilded silver, produced by die-stamping. The appliqués are of various shapes: circular, triangular, and square, ranging from 1.2 to 2.5 cm in diameter (Fig. 3/6).



Fig. 3. Grave No. 13 (photo. Museum in Priština – with relocated seat).

Grave no. 16:

A pair of bronze wire hoop earrings, 1.9 cm in diameter, and two cast bronze rings: one is a simple hoop ring, 1.8 cm in diameter; the other has a square bezel with emphasised shoulders, 1.9 cm in diameter.

Grave no. 30:

A cast bronze ring, 1.8 cm in diameter, made using the fracture technique, with a rectangular bezel from which three arms extend – the central one resembling a braid. The bezel is later engraved with the inscription “PAX” (Fig. 4). An iron knife, 9 cm long, forged with a triangular cross-section blade and an elongated tang for insertion into a handle.

Fig. 4. Grave No. 30
(photo. Museum in
Priština – with relo-
cated seat).

**Grave no. 37, Tumulus IX:**

A bronze hoop with thickened ends, 1.9 cm in diameter, and a cast bronze ring with a truncated conical bezel, 1.8 cm in diameter.

Grave no. 39, Tumulus IX:

A cast bronze hoop ring with four opposing bulges, 1.9 cm in diameter, and a bronze band bracelet, 5.5 cm in diameter, with open, oval-flared ends, decorated with stamped “eye” motifs (Fig. 5).

Grave no. 45, Tumulus VIII:

A pair of bronze earrings adorned with filigree technique, 5 cm in diameter, featuring three globules – the central one biconical, the side ones smaller and spherical (Fig. 6/1). A bronze ring, band-shaped with an oval-expanded bezel, 1.8 cm in diameter. The bracelet is cast, round in



Fig. 5. Grave No. 39 (photo. Museum in Priština – with relocated seat).

cross-section, with open ends, decorated with engraved lines, 5 cm in diameter (Fig. 6/2).

Detailed information on the burial practices and funerary customs is not known. However, the choice of location for the formation of the necropolis is not surprising. Secondary use of prehistoric tumuli for burials in the mediaeval period has been documented at several sites, both in Serbia and in neighbouring regions.¹³ In Kosovo and Metohija specifically, similar examples have been recorded at Vlaštica near Gnjilane,¹⁴ Široko near Suva Reka,¹⁵ and Banja near Mališevo.¹⁶ The establishment of Christian necropoleis on top of prehistoric mounds is typically interpreted through practical considerations – the elevated and prominent position of the tumulus relative to its surroundings – as well as through the symbolic intent to continue burying the dead in a location

¹³ Веселичић 2008; Šućur 2018, 120–126.

¹⁴ Бачкалов 1998, 406.

¹⁵ *Ibid.* 394.

¹⁶ Радичевић 2023, 319–320.



Fig. 6. Grave No. 45 (photo. Museum in Priština – with relocated seat).

already used for that purpose in earlier times.¹⁷ However, with this latter assumption arises the question of how people knew that older graves were present. They may have been encountered during later burials, and the example from tumulus VIII – where disturbed bones and broken pottery fragments were collected and placed into a separate pit – suggests that such remains were treated with a degree of care, and possibly even respect.

The chronological determination of the graves is based on the analysis of the grave goods, which – aside from the knife from grave no. 30 –

¹⁷ Веселичић 2008, 102.

consist entirely of ornamental objects. More specific conclusions can be drawn only from the items published. Based on these, the oldest graves appear to be those in tumulus IX, while the two graves from tumulus VIII are slightly younger. As for the graves in tumulus X, for which no finds have been reported, Tasić's assumption remains open – that they were dug only after the entire surface of tumulus IX had already been used for burial.¹⁸

The richest grave in terms of finds was grave no. 13, in which a pair of earrings with four globules, a bracelet, three rings, a double pendant, and several appliqués were discovered (Fig. 3). Although no detailed description or illustration of the earrings exists, they are said to be silver, crafted in filigree technique with four globules, and can be confidently associated with a well-known group of similar earrings widespread across the Balkan peninsula, dated mostly to the tenth–eleventh centuries,¹⁹ or more broadly from the late ninth to the late eleventh century.²⁰

Such earrings are also known from nearby regions. Accidental finds from Čečan near Vučitrn have been approximately dated to the tenth–eleventh centuries, while examples from graves in Matičane are dated from the late tenth to the late eleventh century, as are the specimens from Badovac.²¹ Numerous examples also come from North Macedonia, where they are similarly dated to the tenth–eleventh century, or more specifically to the transition between the tenth and eleventh centuries.²²

The bronze bracelet from grave no. 13 (Fig. 3/4) belongs to the type of band-shaped bracelets with a hinge-clasp mechanism. It was made of thin sheet metal and decorated along its entire length. The origin of such bracelets lies in Byzantine jewelry of the eleventh–twelfth centuries, when they were produced in silver using the repoussé technique, often featuring medallions with representations of animals and birds, and decorative bands filled with spiral motifs. More modest bronze versions, like the one from Prčevo, were made in imitation of these luxury items and are known from Serbia, North Macedonia, Bulgaria, and Greece.²³ In

¹⁸ Тасић 1979, 92.

¹⁹ Манева 1992: 50, pl. 16; Радичевић 2009, 354–355; Bikić 2010, 44–47, fig. 18 and 19.

²⁰ Григоров 2007, 25–26, fig. II, 26, and 46.

²¹ Jovanović & Vuksanović 1981, Y243.1; Y248/2/1.1; Јовановић 1988a, 23–26; Бачкалов 1998, 379, cat. nos. 364–365.

²² Манева 2000, 54–55, pl. III.

²³ Григоров 2007, 72–73, fig. 97–99; Bikić 2010, 84–85, fig. 55.

Serbia, they have so far been found in the southern regions – Niš and Kosovo²⁴ – though individual examples have also appeared in the Danube region.²⁵ Their period of use is generally dated to the eleventh century. In North Macedonia, such bracelets are placed within a broader chronological framework from the tenth to the twelfth century,²⁶ though burials containing them are mostly dated to the late tenth and eleventh centuries,²⁷ and they are absent from later graves.²⁸

The three rings from grave no. 13 differ in form and belong to distinct typological groups. The bronze ring with a truncated pyramid-shaped bezel and prominently modelled shoulders (Fig. 3/1) belongs to a group characterised by widened shoulders and conical or pyramidal bezels. This type began to appear in the territory of present-day Serbia in the last decades of the tenth century and remained in use through the early decades of the twelfth century.²⁹ The second ring (Fig. 3/2) belongs to a group of rings featuring a circular bezel set with glass. The setting is framed by a wire or a narrow metal band, and the bezel is soldered onto a hoop of varying profiles – band-shaped, round, or twisted. Such rings appear across a wide area, from the lower Danube to the Morava region, beginning as early as the second half of the ninth and the first half of the tenth century.³⁰ Similar forms occur throughout central and eastern parts of the Balkans from the late tenth and into the eleventh century.³¹ In Bulgaria, the use of such rings continued into the twelfth century,³² although it appears their usage should be limited at the latest to the early or mid-twelfth century, since they are absent from later cemeteries – as shown by research results from the Serbian Danube region and elsewhere.³³ The largest number of analogous examples currently comes from burials in Maticane, and one such ring was also found in the contemporary necrop-

²⁴ Ерцеговић-Павловић 1976, 89, pl. VII/7; Jovanović & Vuksanović 1981, Y 240/9, 10.

²⁵ Шпехар & Стругар-Бевц 2016, 87, fig. 7.9.

²⁶ Манева 1992, 71, pl. 41.

²⁷ Манева 2000, 129–133.

²⁸ Кепеска 2008, 44–45, fig. 55–56.

²⁹ Јовановић 1978; Bikić 2010, 102–104.

³⁰ Fiedler 1992, 182, Abb. 40.9; Dostál 1966, 57–58, fig. 12/29.

³¹ Манева 1992, 87, pl. 82; Манева 2000, 70–71, pl. 17; Bikić 2010, 105–109.

³² Григоров 2007, 62, fig. 69.1–9, 74, 87.

³³ Радичевић 2007, 91–92; Радичевић 2009b.

olis at Badovac.³⁴ Based on observations about the duration of use at these cemeteries, these rings can be dated to the eleventh century.

The third ring from the same grave (Fig. 3/3) can be classified within the group of rings with a band-shaped hoop and a conical or domed bezel, decorated with filigree wire and granulation. Thanks to associated coin finds from certain graves and hoards, the use of such rings in the Balkans has been dated from around 976 to the early twelfth century.³⁵ Luxurious examples adorned with filigree and granulation are well represented at sites in the surrounding regions – in Kosovo and in the Vardar valley – where they are generally dated to the tenth–eleventh centuries.³⁶

A separate group of finds from grave no. 13 consists of a two-part pendant and two circular appliqués (Fig. 3/5–6). All items are made of thin gilded silver sheet. The lower part of the two-part pendant is heart-shaped, ending in a trefoil design at the bottom, and features a suspension loop at the top. The upper part is a small circular disc with a hook from which the lower part hangs (Fig. 3/5). Unlike the previously discussed finds from this grave – whose workshop origins are located in the Balkans – this type of pendant has its origin in the northern regions of the Carpathian basin. In that area, two-part heart-shaped pendants, worn as dress ornaments, constitute one of the most recognisable symbols of contemporary fashion. Their production began in the tenth century, following the settlement of the Magyars – approximately from the second quarter of the century – and they remained in use throughout the eleventh century as standard components of the so-called Bijelo Brdo culture.³⁷

They appear in numerous variants that have been the subject of specialised studies.³⁸ Earlier examples of such pendants are typically made of thin gilded silver sheet – like the specimen from Prčevo – while later two-part pendants were cast from bronze or lower-quality silver.³⁹

The circular appliqués from the same grave (Fig. 3/5) currently have no clear analogies within the known material from the Central Balkan

³⁴ Jovanović & Vuksanović 1981, Y240/2/2, 7–8, Y245/2/1, 10–12; Бачкалов 1998, cat. nos. 356–357, 361, 373.

³⁵ Јовановић 1988b, 267–268; Григоров 2007, 62–63; Рядцева 2014, 143–167.

³⁶ Манева 1992, 86–87, pl. 80–81; Манева 2000, 71–73; Bikić 2010, 109–112.

³⁷ Giesler 1981, 23, 89–91, pl. 3/c, 9.a–b; Tomićić 2019, 143–146.

³⁸ Demo 1983; Bálint 1991, 123–132, Taf. XXXVI–XLII; Gáll 2013; Оџа 2014.

³⁹ Radišić 2021, with earlier literature.

region.⁴⁰ A comparable item may be a single appliqué from Ruski Krstur in Bačka, made of bronze sheet by die-stamping and decorated with two concentric rows of circular domed protrusions along the edge, and a larger one in the centre.⁴¹ That area, in general, has yielded a wide variety of clothing appliqués, most commonly made of gilded silver sheet. These include circular, square, and rhomboid shapes, often decorated with domed protrusions or rosette motifs.⁴² However, one detail typically distinguishes these appliqués from those found in Prčevo – the presence of loops on the reverse side for fastening them to fabric. On the other hand, appliqués made of silver or bronze sheet, circular in shape and decorated with domed protrusions, featuring small holes along the edge used for stitching to garments or for attaching pendants, are known from several mediaeval cemeteries in Dalmatia and Istria. These were usually found on the chest area of female or child burials, either as single items or in multiple examples.⁴³ Similar appliqués are also attested in grave no. 149 from Gomjenica near Prijedor, in north-western Bosnia.⁴⁴ Chronologically, such finds are generally dated – based on associated grave goods – to the second half of the tenth and the first half of the eleventh century. Their appearance is interpreted as a reflection of fashion trends originating from the Byzantine cultural sphere, during a period of intensified Byzantine influence along the eastern Adriatic coast.⁴⁵

Other graves from Prčevo also contain objects whose origin must be sought beyond the local cultural context. For instance, the silver hoop ring from grave no. 1 (Fig. 2/2) is a copy of rings made by twisting double silver wire, a type that is much more commonly found in the Carpathian

⁴⁰ At the site of Glasija in Niš, two circular appliqués made of thin bronze sheet were discovered, featuring a row of small domed protrusions along the edge, where a perforation for attachment is also located. However, they are so fragmentarily preserved that their original appearance cannot be reliably reconstructed (Ерцеговић-Павловић 1976, 90–91, pl. II/2, V/8).

⁴¹ Станојев 1989, 102–103, cat. no. 542.

⁴² A similar detail, but in the form of fastening rivets, is present on the reverse side of circular gilded silver appliqués found in one of the graves at Matičane (Јовановић 1988a, fig. 15). Stanojev 1989, cat. nos. 40–44, 48, 58–59, 61, 63–64, 72, 236, 238, 241, 256–265, 271–274.

⁴³ Petrinc 2009, 250–252, fig. 132.

⁴⁴ Miletić 1967, pl. XXIV.

⁴⁵ Petrinc 2014, 85–87.

basin during the second half of the eleventh century.⁴⁶ A silver twisted-wire ring was found in grave 165 at Bijelo Brdo near Osijek, along with coins of the Hungarian king Andrew I (r. 1046–1061), while similar rings from Banatsko Aranđelovo have been discovered in graves containing coins of Ladislaus I (r. 1077–1095).⁴⁷ Finds of this type are also dated to the same period along the lower Danube.⁴⁸

The second ring from the same grave, a solid-cast bronze specimen, bears no particularly distinctive features. It can be assigned to the group of rings with an elevated, flat bezel, which appear in Serbia as early as the transition from the tenth to the eleventh century, and remain in use through the twelfth century.⁴⁹ The closest analogy to the example from grave no. 1 is found in Niš, in grave no. 18 of the necropolis at the Glasija site. The duration of burials at that cemetery is dated to the eleventh–twelfth century. The bezel of the Glasija ring also features a cross motif.⁵⁰

The bronze ring inscribed with the Latin Christian formula PAX from grave no. 30 (Fig. 4) is an extremely rare type, not only in Kosovo and Metohija but in the wider region as well. It is almost identical to a ring held in the collection of the National Museum of Serbia in Belgrade, and this represents one of the very few known examples of such rings from the territory of Serbia. The National Museum specimen was acquired through purchase (with a presumed provenance of Golubac), and it is thought to have originated from a site – likely a settlement or necropolis – within the broader area of the mediaeval Braničevo region.⁵¹

Based on currently available material outside the territory of Serbia, only one ring of this type has so far been found in the Central and Eastern Balkans, specifically in southern Bulgaria, on the shore of lake Glazovir near the village of Stambolovo in the Haskovo region. The burial activity at the necropolis from which it originates has been broadly dated to the eleventh–twelfth centuries, while the ring itself is dated no earlier than the second half of the eleventh century, with the explanation that it could only have reached that region after 1054.⁵²

⁴⁶ Giesler 1981: pl. 4/29–30, 53/29–30.

⁴⁷ Brunšmid 1903–1904: 69, fig. 7, 10; Jovanović 1977, 153.

⁴⁸ Vasiliu 1984, pl. IV.

⁴⁹ Bikić 2010, 98–99, fig. 68.

⁵⁰ Ерцеговић-Павловић 1976, 91, 93, pl. IV, 6.

⁵¹ Марјановић-Вујовић 1986, 223–224.

⁵² Шейлева 2002, 263–267.

In contrast, such rings are known in Dalmatia, albeit in small numbers and so far only from cemeteries associated with churches: for example, in grave 12 near the church on Lopuška glavica in Biskupija, and near St Martha's Church in Bijaći. A related, though uninscribed, ring was found in grave 71 at the Church of the Holy Cross in Nin.⁵³ Another specimen was found in Žminj, Istria, in a grave stratigraphically assigned to the latest burial horizon, and it has been dated to the tenth century.⁵⁴ The finds from Biskupija and Bijaći are dated from the end of the tenth to the middle or early second half of the eleventh century.⁵⁵

Rings of the same type, with the same Latin inscription, are known from the Hungarian part of Baranya, specifically from grave 220 at the Mohács–Majs cemetery and grave 43 at the Pécs–Somogyi cemetery. These cemeteries are dated by coin finds to the eleventh century. Graves surrounding no. 220 in Majs contained coins ranging from 1041 to 1061, while those in Somogyi yielded coins of Stephen I (1000–1038) and Andrew I (1046–1061). The scholar A. Kiss associated the PAX inscription with the Benedictine order, and – considering the finds from Dalmatia – proposed that such rings were produced in Croatia, following Western European models, and were brought into Hungary by South Slavic missionaries.⁵⁶

Finds from Serbia have been broadly dated to the tenth–eleventh century. The appearance of rings bearing Latin inscriptions in this region – which belonged to the Greek linguistic and Eastern Church sphere – remains unexplained, unlike in Dalmatia or Hungary, where such objects appear naturally within their respective Western Christian contexts. In Serbian Danube areas, the phenomenon has been interpreted in light of proximity to Frankish territories, and the possibility has been raised of Hungarian influence, including the presence of Hungarian merchants in Braničevo (both town and region), as well as soldiers involved in Hungarian military attempts to expand south of the Danube.⁵⁷ Another possibility that cannot be excluded is a connection to pilgrims who, in the eleventh century, travelled through Christianised Hungary and the Bal-

⁵³ Petrinc 2009, 72, pl. 245.3; 62, pl. 216.4; pl. 274.3.

⁵⁴ Marušić 1987, 87, pl. XI.6.

⁵⁵ Petrinc 2009, 247–248.

⁵⁶ Kiss 1983, 174.

⁵⁷ Марјановић-Вујовић 1986, 224–226.

kans en route to Palestine,⁵⁸ or even the activity of Western missionaries. As for the solitary find from south-eastern Bulgaria, its appearance has been linked to the passage of the Crusaders in 1096.⁵⁹

Based on the available data on the objects found in the mediaeval graves of Tumulus IX, a more precise assessment can be made regarding the bracelet from grave no. 39. This is a bronze, band-shaped bracelet with open, oval-flared terminals, decorated with a stamped “eye” motif (Fig. 5). This is not the only such find from Prčevo. Another bronze open-ended bracelet was discovered during the excavation of Tumulus VIII, in grave no. 45. This second example is solid, round in cross-section, with tapered and expanded ends, and features a lightly raised rib along its length, decorated with rows of oblique incisions (Fig. 6/2).

In the southern, central, and eastern regions of modern-day Serbia, metal open-ended bracelets – both band-shaped and solid cast – have been found in large numbers. They are equally well-represented in neighbouring regions, especially in North Macedonia and Bulgaria. Across this wider area, these bracelets show typological uniformity, as well as strong similarities in manufacturing techniques and decorative styles. Classifications are based on cross-section shape, terminal form, and ornamentation.⁶⁰ In North Macedonia and Bulgaria, such bracelets are considered characteristic jewelry types of the eleventh–twelfth centuries.⁶¹ Regarding finds from the territory of Serbia south of the Sava and Danube, the twelfth century is usually identified as the peak period of their use.⁶²

Various types of metal bracelets have been found on nearly all necropoleis from that period, with the exception of those in western Serbia, suggesting that such items were worn primarily in areas under Byzantine rule, while they are exceedingly rare further west.⁶³ In the immediate sur-

⁵⁸ Узелац 2018, 23–44.

⁵⁹ Шейлева 2002, 267.

⁶⁰ Bikić 2010, 83–84, fig. 54.

⁶¹ Манева 1992, 70–75; Манева 2000, 66–67; Borisov 1989, 280–285, fig. 333–336; Григоров 2007, 67–71.

⁶² Марјановић-Вујовић 1984, 93–98, fig. 208–210; Радичевић 2008, 198–201.

⁶³ Цуњак & Јордовић 1982, 235, fig. 1; Радичевић 2013, 299; Радичевић & Црнчевић 2016, 429.

roundings of Kosovo and Metohija, these bracelets are also documented at Sočanica, Badovac, Vlaštica, and Velekinac.⁶⁴

In the same grave no. 45, along with the bronze bracelet, a pair of bronze earrings with three pendants (globules) was found – featuring a larger, biconical central bead and two smaller, spherical side beads (Fig. 6/1).⁶⁵ N. Tasić initially referred to them as “Tokaj-type earrings”,⁶⁶ taking into account the composition with a dominant central and smaller lateral beads, which aligns them with the broader group of three-pendant earrings of the so-called Tokaj type, as this typology had long been established.⁶⁷ Although it was clear from the beginning that this was a distinct variant without exact parallels in the surrounding material, the earrings from Prčevo have nonetheless been assigned to the same type in later scholarship. Despite being more delicate and simply decorated, especially at the junction of the cones, they have been compared to the earring from Prahovo.⁶⁸ The more massive Prahovo earring, with a large biconical bead, is dated to the thirteenth century, and the Prčevo specimens may be viewed as an earlier and simpler variant. It has long been emphasised that the appearance of Tokaj-type triple-pendant earrings should not be placed earlier than the twelfth century, with their peak usage beginning in the thirteenth century. By the fourteenth century, these earrings underwent notable transformations in the shape and size of both the pendants and hoops, becoming increasingly elaborate in decoration.⁶⁹

In addition to being referred to as Tokaj-type earrings, the earrings from grave no. 45 have also been described in the literature as “Polovtsian earrings” or earrings of the Polovtsian type.⁷⁰ In older archaeological literature, this term was used for earrings with smooth biconical beads. The designation was adopted from Russian archaeological scholarship, along with the interpretation that the shape’s origin and earliest appearance in

⁶⁴ Бачкалов 1998, 696, cat. no. 377; 718, cat. no. 409; 728, cat. no. 423–424; Фидановски 2010, 43, pl. IX/90–1, 90–2; pl. X/134; pl. XI/157–1.

⁶⁵ The same grave also yielded a bronze ring with a band-shaped hoop and an oval-expanded bezel, but no further details about this item are provided. Its form is mentioned only briefly, without specific information regarding its decoration, dimensions, or typological classification.

⁶⁶ Тасић 1979, 91.

⁶⁷ Ђоровић-Љубинковић 1954, 81–93.

⁶⁸ Bikić 2010, 72–73, fig. 46/1.

⁶⁹ Јанковић 1979, 274–275.

⁷⁰ Бачкалов 1998, 47, cat. no. 139; Марјановић-Вујовић 1986, 222.

the Balkans – particularly in regions under Byzantine rule – could be linked to Turkic-Tatar peoples (Pechenegs, Cumans) who served as mercenaries in the Byzantine army and were later settled to defend borders and road networks.⁷¹

During the twelfth century, earrings with biconical beads exhibited a wide variety of manufacturing styles and decorative treatments of the bead.⁷² In Serbia, they are particularly characteristic of the right bank of the Danube and its central and eastern regions, while their presence becomes increasingly rare in western areas. The westernmost known finds to date are from the West Morava valley and the Pešter plateau.⁷³ In the immediate vicinity of Prčevo, such earrings have been found in Vrbnica near Prizren,⁷⁴ and in Vlaštica and Velekinac near Gnjilane.⁷⁵

The question of origin of this type of earring in the Central and Eastern Balkans remains unresolved. Future discussions must consider the fact that in neighbouring western areas – Bosnia and Herzegovina and Croatia – biconical-bead earrings appear in an earlier period.⁷⁶ This opens the possibility of a different direction of cultural transmission, perhaps from the Byzantine-held cities along the eastern Adriatic coast.⁷⁷ In this region, the appearance of smooth biconical earrings – decorated at the junctions and ends with filigree wire windings – is recorded as early as the tenth century.⁷⁸

In the scholarly literature, the mediaeval burials at Prčevo have been broadly dated to the tenth–twelfth centuries,⁷⁹ or somewhat more widely from the late ninth to the twelfth century,⁸⁰ and even from the tenth to the thirteenth century.⁸¹ Grave no. 45 in Tumulus VIII, “with Tokaj-type earrings and fist-shaped bracelets on the arms”, was once assigned chronologically by N. Tasić to the thirteenth century.⁸² Analysis of the grave

⁷¹ Марјановић-Бујовић 1984, 82–83.

⁷² Bikić 2010, 65–68.

⁷³ Радичевић 2016, 426–427.

⁷⁴ Бачкалов 1998, 701, cat. no. 385.

⁷⁵ Бачкалов 1998, 719, cat. no. 411; Фидановски 2010, 39–40, pl. XI/6.

⁷⁶ Petrinesc 2009, 208–212, fig. 96, 98, 101.

⁷⁷ Bikić 2010, 66; Petrinesc 2010, 22–24, fig. 11.

⁷⁸ Марушић 1987, 77–79; Sokol 2006, 243; Ujčić 2011.

⁷⁹ Бачкалов 1982, 46–47.

⁸⁰ Марјановић-Бујовић 1986, 222.

⁸¹ Бачкалов 1998, 711–715.

⁸² Тасић 1979, 91.

finds, however, indicates that the duration of the cemetery's use can be placed within the eleventh century, though the question remains open as to how far its beginnings and end might shift into the close of the preceding or the beginning of the following century. It is a fact that objects characteristic of the older tenth-century cemeteries known from other parts of Serbia are absent.⁸³ At the same time, some of the burials from Prčevo show similarities to nearby necropoleis in Kosovo and Metohija as well as in the Vardar valley, where the commencement of burial has been dated to the end of the tenth century.⁸⁴ For the double pendant from grave no. 13, an earlier dating could be proposed, yet the circumstances of the find indicate that it had been in use for a longer period and was most likely deposited in the eleventh century. Conversely, grave no. 45 from Tumulus VIII would represent the latest burial, and, based on present knowledge of the appearance of earrings with biconical beads in the Central Balkan region, it cannot, at this stage, be dated earlier than the twelfth century.

Scholarly literature has already emphasised the significant contribution that the study of cemeteries has made to our knowledge of the material culture of the tenth–eleventh centuries in the region of Kosovo and Metohija. These investigations have demonstrated the appearance of jewelry of the same type and of identical or similar workmanship. The first items – most likely originating from destroyed graves – came from Čecan, and were followed by the discoveries of cemeteries at Badovac near Gračanica, Matičane near Priština, and Prčevo.⁸⁵ Most of the finds have typological parallels in cemeteries or hoards across the Slavic world, where such jewellery arose and developed under the influence of Byzantine goldsmithing. The geographically closest analogies are found in the Serbian Danube basin and the Vardar valley, that is, among the Slavic population living at that time within the framework first of the Bulgarian state and subsequently of Byzantium.

A particular feature at Prčevo, just as in the case of the necropolis at Matičane,⁸⁶ is represented by graves containing objects whose origin lies

⁸³ Jovanović & Vuksan 2005; Радичевић 2009a.

⁸⁴ Jovanović & Vuksanović 1981; Јовановић 1988a, 23–26; Бачкалов 1998, 354–379; Манева 2000, 129–131.

⁸⁵ Радичевић 2017, 215–217, with earlier bibliography.

⁸⁶ Јовановић 1988a, 25–26.

in the Pannonian region and which are interpreted as products of early Hungarian goldsmithing. Comparable material – a heart-shaped pendant and an applique – has also been noted in certain graves at the site of Glasija in Niš.⁸⁷ The appearance of graves with such inventories in the Central Balkan area may be interpreted in different ways. It either indicates that their bearers may have originated from the north, or that these were objects acquired through exchange or other forms of contact. Through trade or contacts of another nature, already during the tenth century, various kinds of Byzantine products also reached the Pannonian area in the opposite direction.⁸⁸ If, however, these were indeed settlers from Pannonia, the objects can also be interpreted in light of the symbolic meaning they may have had for their owners, who over time adopted the material culture of their new environment, yet could still preserve – and even be buried with – items that might have held a deeper identity-related significance for them.⁸⁹ The graves from which these derive can be dated primarily to the eleventh century, at the earliest to the end of the tenth. The fact that in all cases the items are either mismatched or damaged, and apparently were not even worn in the way originally intended, testifies to their prolonged use.

When it comes to the relations of the newly arrived Hungarians toward the areas south of the Sava and Danube, written sources mostly testify to raiding expeditions that struck the Balkans from the 930s to the 970s.⁹⁰ Among these reports, however, there stands alone a piece of evidence that, in the same period, there was also settlement of the Hungarian population on Balkan soil. Later Hungarian tradition, preserved in the *Gesta Hungarorum* of the Anonymous Notary of King Béla, contains information about the campaign of two Hungarian magnates, Zuardu and Cadusa, undertaken already in the time of Árpád (895–907). The Hungarian troops crossed the Danube and seized Braničevo, after which they marched toward Serdica. The Bulgarian and Macedonian population offered them peace, gifts, and hostages, which the chieftains accepted, but they nevertheless continued with their conquests. They captured the fortress of King Philip (probably Philippopolis), then *Cleopatram ci-*

⁸⁷ Ерцеговић-Павловић 1976, 90, Pl. VI, 6–7.

⁸⁸ Langó 2013.

⁸⁹ Радишић 2020, 403.

⁹⁰ Moravcsik 1970, 55–61; Димитров 1998, 71–85.

vitatem (assumed to be Neopatras in Thessaly), and the whole land from Dyrhachium to Serbia. The text then states that a portion of the people who had taken part in the campaign with Zuard remained permanently settled on Greek soil after his death, and were even called “fools” by the Greeks because they did not return to their homeland.⁹¹

The information supplied by the Anonymous Notary has long been connected with the so-called Vardar Turks (*Βαρδαριῶται Τούρκοι*), identified as a group of Hungarians – designated as “Turks” in contemporary Byzantine writings – who remained settled within the territory of the Roman (Byzantine) Empire, namely in the region of the Vardar valley.⁹² Their settlement is dated to the turn of the ninth and tenth centuries, or to the years immediately thereafter. Soon after their arrival they were Christianised, and by no later than the end of the second decade of the tenth century they had been organised into a distinct diocese, established on ethnic grounds, within the Thessalonican metropolis. From a second chrysobull of Emperor Basil II (976–1025), issued in 1020 to the Archbishopric of Ohrid, it appears that for some time they were under the jurisdiction of the ecclesiastical see of Ohrid. By the end of the twelfth century, the Vardariot military-administrative unit had attained the status of a theme. In the Komnenian period, a practice was established of recruiting soldiers from among the Vardariots to serve at the imperial court as guardsmen. They preserved their ethnic identity in the late Byzantine era and even thereafter, since a Vardariot bishopric in the region of Macedonia, around Lake Doiran, is attested even after the fall of the Empire.⁹³

As far as is known from present publications, no finds of Old Hungarian origin have yet been recorded in the Vardar valley. Such finds are attested somewhat further to the north, yet still outside the area that, on the basis of written sources, is associated with Hungarian settlement. At present we lack an adequate explanation for their appearance in that region, and the answer seems likely to come only from future research and new discoveries. With regard to the foreign objects found in the graves at Prčevo, a similar question arises concerning the ring with a Latin inscription from grave no. 30. Interpreting similar finds from Baranya, A. Kiss associated the formula PAX with the Benedictines and, being aware of

⁹¹ SRH 1937, vol. 45, 92–93.

⁹² Oikonomidès 1973.

⁹³ Цветковић 2019, Цветковић 2023, 288–289.

finds from Dalmatia, suggested that such rings were produced after Western European models somewhere in Croatia and brought to Hungary by South Slavic missionaries.⁹⁴ The occurrence of rings with Latin inscriptions on the territory of present-day Serbia, south of the Sava and Danube – in a region that belonged within the sphere of the Greek language and the Eastern Church – remains unexplained, unlike in Dalmatia and Hungary, where the phenomenon appears entirely normal. In the Serbian Danubian region, it has been explained by the proximity of Frankish territory, while other proposed explanations include the influence of Hungary and the presence of its merchants, as well as soldiers engaged in Hungary's attempts to expand its territory south of the Danube.⁹⁵ Nor can one exclude a possible connection with pilgrims who, in the eleventh century, travelled to Palestine via Christianised Hungary and the Balkans,⁹⁶ or even the activity of Western missionaries. As for the presently unique find from south-eastern Bulgaria, its appearance has also been linked with the passage of crusaders in 1096.⁹⁷

At the older cemeteries in Kosovo, at Matičane and Badovac, burials ceased sometime toward the end of the eleventh century. By contrast, in present-day Metohija the use of known cemeteries begins in the tenth or eleventh century and continues into the twelfth–thirteenth century.⁹⁸ Taking into account the dating of the finds from the latest graves, nos. 39 and 45, the necropolis at Prčevo could also be associated with them, extending its use into the twelfth century. In general terms, unlike the earlier material which reflects influences from the north and west, the twelfth-century jewelry from Kosovo and Metohija corresponds entirely to the types and forms widespread in regions that lay within the Byzantine Empire, and subsequently for the most part within the eastern and south-eastern territories of the state of the Serbian Grand Župan Stefan Nemanja.⁹⁹

⁹⁴ Kiss 1983, 174.

⁹⁵ Марјановић-Вујовић 1986, 224–226.

⁹⁶ Узелац 2018, 23–44.

⁹⁷ Шейлева 2002, 267.

⁹⁸ Радичевић 2017, 215–217.

⁹⁹ Радичевић & Црнчевић 2016.

Abbreviations

SRH – Szentpétery, E., ed. 1937. *Scriptores Rerum Hungaricarum*. Budapest: Academia litter. hungarica atque Societate histor. hungarica.

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ADDENDUM

Amicus curiae

(On the occasion of the round table
“Memory of Academician Nikola Tasić”)

The Center for Scientific Research of the Serbian Academy of Sciences and Arts and the University of Kragujevac organized a round table on the figure and work of Academician Nikola Tasić (1932–2017), on the occasion of the ninetieth anniversary of his birth and five years since his death. The round table entitled “Memory of Academician Nikola Tasić” was held in the University Gallery on December 2, 2022. It was attended by a large number of visitors, friends and admirers of the figure and work of Nikola Tasić, archaeologists from the Institute for the Protection of Cultural Monuments, as well as archaeologists from the national museums in Jagodina, Čuprija and Paraćin. All of the actors involved in the organization of this event, both the organizers and the program participants, entered with undisguised satisfaction and enthusiasm, seeing it as an opportunity to publicly show how much we appreciate Nikola Tasić and to express our sincere gratitude to him posthumously. Nikola Tasić, like a rare scholar before him, successfully united all the components of his scientific, professional, pedagogical and organizational work, creating an authentic quality, the basis of which was his calm, noble nature, human selflessness and his clear and consistent life principles.

Academician Nikola Tasić, over the course of his long and prolific scholarly and professional career, held numerous important positions (Director of the Institute for Balkan Studies of the Serbian Academy of Sciences and Arts – SASA, Director of the National Museum in Belgrade, Secretary-General of SASA, Vice-President of SASA, among others). He also served as the Head of the SASA Center in Kragujevac from 1997 to 2010. After the death of Academician Dragoslav Srejšević, one of the founders and the first head of the Center, Nikola Tasić – then a corresponding member of SASA – readily accepted the demanding task of managing the Center in Kragujevac, which at that time occupied an

uncertain position with respect to both of its founding institutions, SASA and the University. Tasić's presence in Kragujevac, especially as he later became a full member of SASA, Director of the Institute for Balkan Studies, and Director of the National Museum in Belgrade, lent greater weight and importance to the Center and significantly contributed to its affirmation within the Serbian Academy of Sciences and Arts.

Although, during his three terms as Head of the Center, he devoted a substantial part of his time, his tremendous work ethic and intellectual energy, and his exceptional organizational abilities to its development, he nevertheless gave the impression that his engagement in Kragujevac was a welcome duty – indeed, even a source of personal satisfaction. Throughout this period, as the Center's Secretary, I had the honor of being his closest collaborator and of receiving his invaluable advice and guidance; at the same time, he was always willing to listen to and accept my suggestions or those of anyone else. He was invariably calm and composed; I never heard from him a single impatient word or raised voice. For this reason, amid the many facets of his contribution, the working atmosphere he cultivated – and symbolically bequeathed to his colleagues – remains especially striking and truly inimitable.

His commitment to the work in Kragujevac stemmed from an inherent sense of responsibility to place his professional and social standing in the service of the public good, but also from two deeply personal motives: his desire to continue along the "Kragujevac path" charted by his esteemed colleague Dragoslav Srejović, and his own sentimental connection to the city in which he had attended secondary school and begun his first professional appointment after graduation, as a curator at the National Museum. As the Center's longest-serving head, he left an extraordinarily deep mark on its three decades of activity. He initiated the establishment of the Dragoslav Srejović Memorial, intended both to preserve the memory of his colleague and predecessor, and, of particular relevance, to foster the development of archaeological research in Šumadija and the Pomoravlje region, given that archaeology is not taught at any of the twelve faculties of the University of Kragujevac. He organized two international scholarly conferences dedicated to Academician Dragoslav Srejović—"Dragoslav Srejović and Prehistory" (1997) and "The Work of Dragoslav Srejović in the Study of Classical Archaeology" (2002), and served as editor of the corresponding volumes. He placed special empha-

sis on developing the Center's publishing activity, so that during his tenure the Center published or co-published a total of 35 works (monographs, conference proceedings, dictionaries, and a compact disc).

In his opening remarks at the roundtable dedicated to the memory of Nikola Tasić, Academician Miloš Đuran, the current Head of the SASA Center in Kragujevac, spoke about Tasić's importance for the development of the Center. Among other things, he shared his experiences of collaborating with Tasić during the period in which he himself served as Rector of the University of Kragujevac (2004–2009). He emphasized that Tasić's most significant practical contribution during that time was his support for the scientific program Bioengineering, which had been launched within the SASA Center in Kragujevac in 1997. The Bioengineering Program was initiated by Prof. Dr. Miloš Kojić, then Deputy Head of the Center (now an Academician), in collaboration with his young colleague Dr. Nenad Filipović (now Rector of the University of Kragujevac). The program pursued multiple aims: the establishment of new scientific fields (Biomedicine, Bioengineering, Information Technologies), the employment of young researchers, and the fostering of national and international cooperation and participation in national and international projects.

This scientific program received full institutional support in 2005, when an agreement was signed between SASA, the University of Kragujevac, and the City of Kragujevac, securing stable funding and enabling the hiring of five talented young researchers from the natural and technical sciences. In 2010, the Bioengineering Program evolved into an independent Research and Development Center for Bioengineering in Kragujevac (BioIRC Ltd. Kragujevac).

The life and career of Academician Nikola Tasić were presented by Dr. Biljana Đorđević, Museum Advisor at the National Museum of Serbia, while his scholarly work was discussed by Dr. Vladimir Petrović, Senior Research Fellow at the Institute for Balkan Studies of SASA, and Dr. Vojislav Filipović, Senior Research Associate at the Archaeological Institute in Belgrade. Corresponding Member of SASA Vujadin Ivanišević spoke about Tasić's achievements in the high-ranking positions he held within the Academy, and Academician Miloš Kojić, speaking from the United States via video link, reflected on his collaboration with Tasić during their joint work at the SASA Center in Kragujevac. He particu-

larly emphasized the key, visionary role that Tasić, as Head of the Center, played in securing funding for the Bioengineering Program, as well as the personal friendship and collegial support he consistently provided.

Through his many decades of scholarly and professional work, Nikola Tasić contributed greatly to science and culture, to institutions and associations, to colleagues and friends. He exerted his positive influence both directly and indirectly, as a scholar and as a leader, but also simply as a human being. Some were aware of this; some will come to realize it only later; and most will never fully grasp it. Among the few who remember their esteemed colleague, professor, and mentor with unfeigned reverence is Kemal Ljuci, “former Director of the Museum of Kosovo and Curator for the Metal Ages, recipient of the Certificate of Appreciation of the Serbian Archaeological Society on the occasion of its centenary, and a member of the German Archaeological Institute”. On the day of the gathering, he sent a letter from Priština, which was read aloud at the event:

“Dear colleagues, dear friends,

I deeply regret that I am unable to attend the gathering dedicated to my dear Nikola Tasić, but with these few words I would like to pay my respects and remember him as a fine teacher, a noble man, and a true friend.

Everything I have accomplished in archaeology throughout my career, I achieved alongside my TEACHER in the ABCs of archaeology – Nikola Tasić, who, without the slightest hesitation, guided me through its intricacies with his well-intentioned advice during our many years of collaboration and companionship. Nikola taught me many things, not only in the field of prehistoric archaeology. By his example and by his conduct, he showed me what it means to be generous, and not envious or jealous of one’s colleagues, for the knowledge one acquires through work must be passed on to younger generations. He knew how to do this. Whoever is aware of his own professional work will pass it on for the future.

I was still a student when our cooperation and friendship began. At that time, he was investigating Iron Age tumuli in Kosovo. Around that same period, I received my thesis topic from my supervisor, Dragoslav Srejskić. The topic was ‘Iron Age Necropoleis in Kosovo’. Since there was not much material available for such a topic at the time, as soon as I men-

tioned it to Nikola, he immediately responded by offering me his material from the site of Prčevo, which he was then excavating. I was surprised and said that the material was unpublished, but he replied: 'Kemo, by giving you this material, I will lose neither my titles nor my academic standing, and you will complete an important obligation. The future is yours, and continued work and advancement in the profession lie ahead of you.'

I was fortunate to be his student and collaborator, and I learned from him not only about archaeology, but also about how one ought to live, take joy in life, and relate to those who are close to you and who care about you.

Warm greetings, with best wishes for the success of the gathering."

Academician Nikola Tasić had a great love for humor and never missed an opportunity to enjoy pleasant company. He was an ardent admirer of music—old urban songs, tavern music, as well as classical repertoire. For this reason, the artistic program of the gathering held in his honor was carefully selected. Outstanding students of the Faculty of Philology and Arts in Kragujevac performed under the guidance of Marina Trajković Bižovski, Associate Professor: Jovana Vukajlović and Dunja Jovančević, sopranos, who presented the arias "Nimfa" by Petar Krstić, set to the poetry of Aleksa Šantić, and "Marguerite" from Charles Gounod's opera "Faustus", accompanied on piano by Dušan Toroman, independent artistic associate.

As part of the program, a video presentation was shown, conceived and produced by Dr. Nenad Tasić, Full Professor at the Faculty of Philosophy in Belgrade, in memory of his father. The video consisted of numerous personal and family photographs illustrating various periods and aspects of the life and work of Academician Nikola Tasić, accompanied by traditional Vojvodina "bećarac" music. Inspired by the film, which awakened memories of thirteen years of active collegial cooperation within the work of the Center, during which I always received unwavering understanding and support from my director, I, as the moderator of the program, offered the following reflection:

"At various moments in life, we ask ourselves: what do people lack in order to endure their own lives? Cheerfulness and imagination!

Academician Nikola Tasić lacked neither. He understood that the greatest danger in a person's life is to exhaust oneself in a single sphere, in a single possibility. He creatively cultivated and lived through both science and art, yet he also drew strength and vitality from all other segments of life, to their fullest extent. Hence, in the film that was presented, Nikola Tasić bears witness to the fullness of life and conveys a message: Do not stand still, do not give up. Move forward. Walk. Run. Go all the way!"

Professor Dr. Nenad Tasić has donated the entirety of his father's extensive library to the University of Kragujevac, where it is now housed in the University Library. The donation comprises more than 1,500 books and offprints, including non-book materials (photographs, personal items, and valuable drawings created during archaeological fieldwork), as well as unpublished papers. On behalf of the University of Kragujevac, Professor Dr. Biljana Petrović, Vice-Rector for Scientific Research, expressed gratitude for this generous gift. On 10 November 2023, at the ceremony marking World Science Day, the University of Kragujevac presented Professor Dr. Nenad Tasić, as the family representative, with a *Certificate of Appreciation for the donation of the personal library of Academician Nikola Tasić to the University Library*. Proceedings are currently underway to grant this library the status of a cultural good and to designate it as a legacy.

Lela Vujošević, Sociologist
Secretary, Center for Scientific Research
of the Serbian Academy of Sciences and Arts
and the University of Kragujevac

AUTHOR BIOGRAPHIES

Stefan Alexandrov, PhD, is a Principal Research Fellow and faculty member at the National Institute of Archaeology with Museum of the Bulgarian Academy of Sciences (NIAM-BAS), specialising in Thracian archaeology. His research focuses on the Bronze Age of Southeast Europe. He is widely recognised for his work on the transition to the Bronze Age. Mr. Alexandrov has extensive experience in Late Bronze Age archaeology, contributing significant insights into the burial rites and social structures of prehistoric Thrace through long-term field investigations and material culture analysis.

Dragana Antonović, PhD, is a Principal Research Fellow at the Institute of Archaeology in Belgrade. She earned her PhD from the University of Belgrade with a specialised focus on Neolithic stone industries. Her extensive research explores the technological evolution of Neolithic and Eneolithic societies, specifically investigating the production, raw material sourcing, and symbolic significance of stone and copper implements. A leading expert in ancient metallurgy and mining, she currently directs the research at the Mali Šturac prehistoric mining site and contributes to major projects examining cultural identity and technological processes within the Central Balkans.

Vera Bitrakova Grozdanova, PhD, is a distinguished archaeologist and a Full Member of the Macedonian Academy of Sciences and Arts (MANU). Throughout her prolific career, she has served as a Professor of Classical Archaeology and Ancient Art History at the University of Skopje. She earned her doctorate from the University of Zagreb, specializing in the Hellenistic and Roman periods. Her research is fundamental to the study of urbanization, ancient cults, and early Christian art in Macedonia. A recipient of the prestigious Herder Prize (1999) from the University of Vienna, she has directed landmark excavations at sites such as Plaošnik (Ohrid), Stobi, and Golem Grad. Her work on Hellenistic

monuments and numismatics remains a cornerstone for understanding the cultural heritage of the Central Balkans.

Aleksandar Bulatović, PhD, is a Principal Research Fellow at the Institute of Archaeology in Belgrade. He earned his PhD from the University of Belgrade in 2008, specialising in the development of Copper Age cultures within the South Morava basin. His research primarily examines the complex interactions of Central Balkan populations during the Eneolithic and Bronze Age, with a particular focus on the absolute chronology of the Metal Ages. Additionally, he investigates the ritual and spiritual dimensions of prehistoric and early historic societies, providing critical insights into ancient belief systems. His work is underpinned by extensive topographic studies in south-eastern Serbia, significantly advancing the understanding of regional cultural dynamics in prehistoric Europe.

Mateusz Cwaliński, PhD, is an Adjunct Professor at the Institute of Archaeology, University of Gdańsk. A specialist in Prehistoric Archaeology, his research primarily focuses on the Middle Bronze Age of Europe, with particular expertise in the Tumulus culture and its barrow burial traditions. Mr Cwaliński is highly regarded for his integration of GIS (Geographic Information Systems) and Landscape Archaeology into the study of prehistoric social structures. His expertise also extends to archaeological prospection and the study of amber as a prestige commodity in Bronze Age trade networks. Through his work, he explores the complex relationship between ancient communities and their environment, combining traditional excavation with cutting-edge spatial analysis.

Vidan Dimić, PhD, is a Research Associate at the Institute of Archaeology in Belgrade. He earned his doctorate at Faculty of Philosophy, University of Belgrade with a dissertation on Neolithic polished stone tool production and experimental traceology. His research is centred on archaeotechnology, specifically the exploitation, manufacture, and circulation of stone raw materials and tools within prehistoric Serbia. A specialist in functional-typological and traceological analyses, Mr Dimić utilises experimental archaeology to reconstruct the technological choices, skills, and knowledge exchange of Neolithic communities. His work,

which includes detailed petrologic and traceological studies of assemblages from sites such as Lađarište, offers a deeper understanding of the socio-economic behaviour of early European populations.

Daria Ložnjak Dizdar, PhD, is a Senior Research Associate at the Institute of Archaeology in Zagreb and an Assistant Professor at the University of Zagreb. She earned her doctorate in 2009, specialising in the Late Bronze Age and the transition to the Iron Age in the southern Carpathian Basin. Her research is widely recognised for its focus on the Urnfield culture, mortuary practices, and prehistoric identities. She has led several significant projects funded by the Croatian Science Foundation, including a pioneering study on “Childhood in Protohistory”. Daria Ložnjak Dizdar has directed major excavations at sites such as Dolina, Sotin, and Ilok, and has collaborated extensively with the Austrian Academy of Sciences (OREA). She is a key figure in the study of social structures, age groups, and mobility in Bronze Age Europe.

Marko Dizdar, PhD, is a Principal Research Fellow and a Director of the Institute of Archaeology in Zagreb. He earned his doctorate from the University of Zagreb in 2004, specializing in the Iron Age of the southern Carpathian Basin and the Eastern Adriatic coast. Mr. Dizdar has led several significant research projects, most notably the Croatian Science Foundation project FEMINE (Iron Age Female Identities in the Southern Carpathian Basin). He is a leading expert on La Tène culture, directing systematic excavations at key sites such as the Zvonimirovo cemetery. His interdisciplinary research focuses on protohistoric social structures, cultural networking, and technological transfers. A regular collaborator with international institutions like the Römisch-Germanisches Zentralmuseum in Mainz, he also contributes to doctoral education at the University of Zagreb and serves on the editorial boards of numerous archaeological journals.

Katarina Dmitrović, PhD, is a Museum Advisor and the Head of the Prehistoric Collection at the National Museum in Čačak. She earned her PhD from the University of Belgrade in 2015, focusing on the development of metal ages in Central and Western Serbia. Her professional research is primarily dedicated to the Bronze and Iron Ages, particularly within the Čačak region, where she has led numerous field investigations.

She is an active member of the Serbian Archaeological Society (SAD) and the International Union of the Prehistoric and Protohistoric Sciences (UISPP). She has authored a significant number of scholarly papers and frequently participates in international conferences and workshops, contributing to the understanding of prehistoric communities in the Western Morava valley.

Snežana Ferjančić, PhD, is a Full Professor at the University of Belgrade's Faculty of Philosophy within the Department of History. She earned her doctorate from the same institution in 2007 with a dissertation focused on the social history of the Roman army in the provinces of Dalmatia, Pannonia, and Moesia. Her primary research interests encompass Latin epigraphy and the history of the Roman military, contributing significant insights into the administrative and social structures of the Roman Balkans. In addition to her academic and teaching roles, she serves as a member of the Governing Board of the Society for Ancient Studies of Serbia.

Florin Gogâltan, PhD, Dr. Habil., is a Principal Research Fellow at the Institute of Archaeology and Art History of the Romanian Academy in Cluj-Napoca and a Professor at the West University of Timișoara. He earned his doctorate in 1999 and his habilitation in 2015 at the Babeș-Bolyai University. A renowned specialist in the Early and Middle Bronze Age, his research is focused on the cultural dynamics of the Carpathian Basin, with a particular emphasis on tell settlements, prehistoric fortifications, and metallurgy. He has led major excavation projects at sites such as Sântana-Cetatea Veche, Pecica, and Foeni, and is a Corresponding Member of the German Archaeological Institute (DAI). His extensive work bridges the archaeological records of Romania with those of the wider Balkan and Central European regions.

Blagoje Govedarica, PhD, is a Corresponding Member of the German Archaeological Institute (DAI) and a Professor at the Free University of Berlin. He earned his doctorate from the University of Belgrade in 1988, later obtaining his habilitation at the University of Heidelberg with a seminal work on the early ochre-grave complex in the Carpatho-Balkan and steppe regions. A authority on the Eneolithic and Bronze Age of Europe and the Mediterranean, his research focuses on funerary archaeolo-

gy, landscape archaeology, and the complex interactions between prehistoric communities of the Balkans and the Eurasian steppes. Throughout his distinguished career, he has directed excavations at over 300 sites across Europe and has served as a long-standing editor of the *Godišnjak Centra za balkanološka ispitivanja* (ANUBiH), significantly shaping the field of Balkanology.

Attila M. Horváth is a senior archaeologist at the Budapest History Museum, within the Department of Prehistory and the Migration Period. He is a prominent specialist in the Late Iron Age, with a particular focus on the La Tène culture and Celtic archaeology in Central Europe. His research explores the social and economic structures of Celtic settlements and cemeteries in the Middle Danube region. As a leading researcher at one of Hungary's most significant museums, he has overseen numerous excavations that have reshaped our understanding of prehistoric Budapest and its surroundings during the final centuries BC.

Tanya Hristova, PhD, is the Principal Research Fellow at the National Archaeological Institute with Museum of the Bulgarian Academy of Sciences (NAIM-BAS). She is a member of the long-term research team investigating the prehistoric necropolis at Baley, a key site for understanding burial practices and cultural dynamics in the Lower Danube region. She is working on the problems of the Late Bronze and Early Iron Age in the Eastern Balkan.

Georgi Ivanov, PhD, is an Assistant Professor within the Thracian Archaeology Section at the National Archaeological Institute and Museum of the Bulgarian Academy of Sciences (NAIM-BAS). He earned his doctorate in 2007 with a dissertation focused on burial practices during the Late Bronze Age in the Central Balkans. Since 2009, he has served as a Chief Assistant and professional archaeologist, specialising in both settlement archaeology and funerary rites of the Bronze and Early Iron Ages. His research provides critical insights into the social structures and spiritual life of prehistoric Balkan communities, bridging the gap between material culture and ancient belief systems through meticulous field investigations and comparative analysis.

Antonio Jakimovski, PhD, is a Full Professor at the Faculty of Philosophy, Ss. Cyril and Methodius University in Skopje. He earned his doctorate in 2008 with a definitive study on ancient lamps in Macedonia. His extensive field experience includes directing major archaeological excavations, most notably at the Ancient Theater in Scupi, the Roman Forum in Stobi, and the significant site of Staro Bonče. A prolific researcher, Professor Jakimovski has delivered lectures at prestigious institutions such as the University of Oxford (Roman Discussion Forum) and the universities of Ljubljana, Zagreb, and Sarajevo. His research interests span Classical and Roman archaeology, the archaeology of the Near East, and numismatics. He has also curated numerous international exhibitions in Germany, Slovenia, Croatia, and Bosnia and Herzegovina, and served as a key member of the Macedonian Archaeological Scientific Society (MAND).

Aleksandar Jašarević, PhD, is a Museum Advisor and Archaeologist at the Museum in Doboj, Bosnia and Herzegovina. He earned his doctorate in 2020 from the University of Primorska in Koper, Slovenia. His research is primarily focused on Balkan prehistory, with a particular emphasis on the Iron Age and the archaeology of paleobalkan communities. Mr. Jašarević is a specialist in settlement, funerary and landscape archaeology, exploring the spatial organisation and social dynamics of ancient populations in the Central Balkans. His work significantly contributes to the preservation and interpretation of the archaeological heritage of the Republic of Srpska through both intensive fieldwork and scholarly publications.

Gordana Jeremić, PhD, is a Principal Research Fellow at the Institute of Archaeology in Belgrade. She specialises in Roman provincial archaeology and Late Antiquity, with a particular focus on the Limes and the history of the archaeological discipline. Her expertise encompasses the analysis of stratigraphy, architectural remains, and material culture, including late antique mosaics and fresco-painting across the territory of modern-day Serbia. She investigates the urbanisation of the Danube region and the provincial interior, exploring social dynamics, technological achievements, and the evolution of public spaces and living standards. Furthermore, her research addresses the rise of early Christianity and its consolidation within the socio-cultural landscape of the Central Balkans.

Aleksandar Kapuran, PhD, is a Principal Research Fellow at the Institute of Archaeology in Belgrade. He obtained his doctorate at the Faculty of Philosophy, University in Belgrade with a thesis on the settlement topography of the Metal Ages in north-eastern Serbia. His primary research interests encompass the archaeology of the Copper, Bronze, and Iron Ages, with a particular focus on early copper and bronze metallurgy and prehistoric architecture. He has conducted extensive studies on the development of prehistoric settlements and necropolises, particularly within the South Morava basin and the broader Balkan region. Currently, he co-directs an international research project on Bronze Age metallurgy and settlement patterns in collaboration with the Austrian Academy of Sciences in Vienna.

Viktor Klochko, PhD, Dr. Habil., is a Professor at the National University of “Kyiv-Mohyla Academy” and a Corresponding Member of the German Archaeological Institute (DAI). He earned his doctorate in 1989 and subsequently received the degree of Doctor Habilitatus from the Adam Mickiewicz University in Poznań (2003). His distinguished career includes leadership roles at the Institute of Archaeology of the National Academy of Sciences of Ukraine and over a decade as the Head of the Archaeology Department at Kyiv-Mohyla Academy. Professor Klochko is a world-renowned specialist in the history of ancient weaponry and warfare, the metallurgy of copper and bronze, and the absolute chronology of Eastern European sites from the 4th to the 1st millennium BC. He has directed excavations at over 200 archaeological sites, including the significant “Merheleva Ridge” complex, and has authored 19 monographs that remain fundamental for the study of the North Pontic cultural circle.

Jovan Koledin is a Museum Advisor at the Museum of Vojvodina in Novi Sad, specialising in the transition from the Late Eneolithic to the Early Bronze Age. His research primarily focuses on the Copper Age and the Bronze Age of the Carpathian Basin, with a particular interest in the Bell Beaker phenomenon and its regional manifestations. His work significantly contributes to the understanding of the complex social and technological changes that occurred in the Pannonian Plain during the third and second millennia BC.

Viktor Lilčić Adams, PhD, is a Full Professor at the Faculty of Philosophy, Ss. Cyril and Methodius University in Skopje, and one of the most prolific field archaeologists in the Balkans. He earned his doctorate from the University of Belgrade in 2000, specializing in architectural stone sculpture from the 1st to the 6th century AD. Throughout his career, which includes serving as the Director of the Cultural Heritage Protection Office, Professor Lilčić Adams has performed an unprecedented systematic survey of Macedonia's territory, personally visiting and documenting over 900 ancient towns and fortifications. His research interests are vast, encompassing ancient construction ceramics, numismatics, early Christian basilicas, and the reconstruction of ancient road networks (including the Via Egnatia and the marches of Alexander the Great).

Marija Ljuština, PhD, is an Associate Professor at the University of Belgrade's Faculty of Philosophy, Department of Archaeology, where she earned her doctorate in 2012 with a thesis on the stratigraphy and periodisation of the Vatin culture. Her research focuses on prehistoric settlements, material culture, and funerary practices of the Bronze and Iron Ages in South-eastern Europe. A dedicated educator and mentor, she has been a guest lecturer at the University of Cambridge, the University of Primorska, and the University of Rzeszów. Professor Ljuština has co-directed research at the site of Židovar and currently contributes to the FLOW project, funded by the Science Fund of the Republic of Serbia, as well as the international FEMINE project. She is an active member of the International Union of Prehistoric and Protohistoric Sciences (UISPP) and the Serbian Archaeological Society.

Miroslav Marić earned his undergraduate, Master's, and Doctoral degrees from the Department of Archaeology at the University of Belgrade's Faculty of Philosophy. He is currently Senior Research Associate at the Institute for Balkan Studies SASA, specialising in the Neolithic, Copper, and Bronze Ages across the Balkans and the Pannonian Plain. His research focuses on prehistoric settlement patterns, landscape archaeology, and ancient economic and survival strategies. Additionally, he has been an active member of the Serbian Archaeological Society since 2007 and the European Association of Archaeologists since 2014.

Dušan Mihailović, PhD, is a Full Professor at the University of Belgrade's Faculty of Philosophy, Department of Archaeology, and currently serves as the Head of the Archaeological Collection. He obtained his doctorate from the same faculty in 1999, with a dissertation focused on the Upper Palaeolithic and Mesolithic of Montenegro. His research is primarily dedicated to Palaeolithic and Mesolithic archaeology in South-Eastern Europe, with a specific expertise in lithic technology, the Middle to Upper Palaeolithic transition, and speleoarchaeology. As a leading authority on prehistoric lithics, his work significantly contributes to the understanding of early human migrations and the development of prehistoric cultures in the Balkans.

Petar Milojević, PhD, is a Research Associate at the Institute of Archaeology in Belgrade, having earned his doctorate from the Faculty of Philosophy, University of Belgrade, in 2023. His research is primarily focused on prehistoric settlement patterns and land use during the Copper and Iron Ages in the Central Balkans. He is particularly interested in the material culture and social organisation of these periods, as well as exploring palaeoeconomic tendencies and technological advancements. Through his work, he seeks to reconstruct the complex socio-economic dynamics and development of prehistoric populations within the region.

Dragi Mitrevski, PhD, is a Professor of Archaeology at the Ss. Cyril and Methodius University in Skopje and one of the most distinguished archaeologists in the Balkans. A prominent theorist and practitioner, he specialises in Prehistoric and Classical Archaeology, with a particular focus on the Bronze and Iron Ages. Throughout his illustrious career, Professor Mitrevski has served as the Director of the Museum of Macedonia and Head of the Department of Art History and Archaeology in Skopje. A former Fulbright Scholar, he has delivered guest lectures at prestigious institutions such as Harvard and Boston University. His extensive fieldwork and research have been instrumental in defining the prehistoric cultural sequences of the Central Balkans, and he remains a key figure in the development of archaeological methodology in the region.

Jovan D. Mitrović is the Senior Curator of the Bronze Age Collection at the National Museum of Serbia in Belgrade. His research is primarily focused on the Bronze Age of the Balkans and Europe, with a spe-

cific scholarly interest in prehistoric ritual, religion, and symbolic expression. He is particularly recognised for his studies on Late Bronze Age bird symbolism and its role in the spiritual life of prehistoric communities. As a curator at the national museum, he manages one of the region's most significant prehistoric collections, combining museum practice with intensive research into the cultural and religious dynamics of the second millennium BC.

Ognjen Mladenović is a Research Associate at the Institute of Archaeology in Belgrade and a doctoral candidate at the University of Belgrade's Faculty of Philosophy. His research primarily focuses on the origins and distribution of tin during the Bronze and Iron Ages, employing a multidisciplinary approach that combines geological prospection, isotope analyses, and the cultural-historical interpretation of bronze artefacts. Through his participation in numerous national and international projects, he also investigates prehistoric architecture, the internal organisation of settlements, and the spatial relationships between ancient communities. His work significantly contributes to the understanding of early metallurgy and social dynamics in the prehistoric Balkans.

Barry Molloy, PhD, is an Associate Professor at the University College Dublin (UCD) School of Archaeology and a Fellow of the Society of Antiquaries of London. A specialist in European and Mediterranean prehistory, his research focuses on the dynamic changes of the 2nd and early 1st millennia BC. He currently leads the prestigious ERC-funded project "The Fall of 1200 BC", which investigates societal collapse, migration, and conflict in Southeast Europe and the Eastern Mediterranean. Professor Molloy has an extensive fieldwork record across the Balkans, including major projects in Serbia, Romania, and Greece. His expertise spans experimental archaeology, ancient warfare, and the study of mobility and resilience in ancient societies.

Vassil Nikolov, PhD, ScD, is an Academician (Full Member) of the Bulgarian Academy of Sciences and Professor Emeritus at the National Institute of Archaeology with Museum (NIAM-BAS) in Sofia. A former Vice President of the Bulgarian Academy of Sciences and Director of NIAM, he is one of the most prominent prehistoric archaeologists in Southeast Europe. His illustrious career is marked by the discovery and

long-term investigation of Provadia-Solnitsata, the earliest prehistoric salt-production and urban centre in Europe, featuring the continent's oldest stone fortresses. Professor Nikolov's research has fundamentally shaped the understanding of the Neolithic and Chalcolithic periods, particularly concerning the origins of Balkan farming cultures, prehistoric religious-mythological systems, and the emergence of the first European civilisation.

Ivan Ninčić is a Research Assistant at the Institute of Archaeology in Belgrade and a doctoral candidate at the University of Belgrade's Faculty of Philosophy. His research focuses on the transition to the Iron Age in the Danube region, with a particular emphasis on community mobility, ancient communications, and the social processes underlying cultural development. Through the study of material culture, specifically "Thracian-Cimmerian" finds and objects with eastern characteristics, he seeks to illuminate the complex interactions of the early first millennium BC. Furthermore, he possesses extensive experience in field archaeology and the application of digital technologies, specialising in surveying and the creation of archaeological models using AutoCAD, GIS, and AgiSoft.

Mirko Peković, PhD, is a Museum Advisor at the Military Museum in Belgrade. His research is primarily dedicated to the study of cold steel, protective gear, and the development of military technology in the Central Balkans during the Middle Ages. His work within the Military Museum involves the preservation, expert analysis, and exhibition of one of the most significant collections of historical weaponry in South-eastern Europe.

Vladimir P. Petrović, PhD, is a Principal Research Fellow at the Institute for Balkan Studies SASA, having completed his doctoral studies in Belgrade and postdoctoral research at the Sorbonne. His distinguished teaching career includes a tenure at the University of Niš and visiting professorships at the University of Bordeaux-Montaigne and EHESS in Paris. As a prolific researcher, he has managed multiple international projects, participated in over fifty global conferences, and published four monographs, including two in French. Proficient in several modern and classical languages, he has also served as an international expert and evaluator for the EU Horizon 2020 (Marie Skłodowska-Curie) programme.

He holds memberships in the Serbian Archaeological Society and the European Association of Archaeologists, and is an associate member of the ANHIMA Scientific Institute in Paris. His main research topics include Roman communications, settlements and population in the Balkans, Roman frontier studies and Latin epigraphy.

Sanja Pilipović, PhD, is a Principal Research Fellow at the Institute of Archaeology in Belgrade, having earned her doctorate in Art History from the University of Belgrade with a focus on the cult of Bacchus in Moesia Superior. Her research is primarily dedicated to the exploration of Roman funerary art and the cults of deities along the Danubian Limes, particularly at the prominent site of Viminacium. Specialising in the cultural and religious life of provincial populations during the 2nd and 3rd centuries, she examines mythological themes and symbolic compositions on sepulchral monuments. Her work provides vital insights into the intersection of art, religion, and social dynamics in the Roman Central Balkans.

Anđelka Putica is a Museum Advisor and Archaeologist at the City Museum of Sombor, where she leads the Prehistoric collection of the Archaeological Department. She graduated in Archaeology from the Faculty of Philosophy, University of Belgrade. Her primary research focus is on the Prehistoric period, with particular expertise in Bronze Age, but also in experimental archaeology.

Dejan Radičević, PhD, is an Assistant Professor at the Department of Archaeology, Faculty of Philosophy, University of Belgrade. His research is primarily focused on Medieval archaeology, encompassing Late Antiquity, Byzantine studies, and the archaeology of religion. He is widely recognised for his significant fieldwork on the Rudnik mountain, where he led discoveries of major medieval urban centres and the “Đurine ćelije” site. In addition to his academic role, he serves as the President of the Medieval Section of the Serbian Archaeological Society, contributing extensively to the study of social and cultural processes in the medieval Balkans.

Victor Sava, PhD, is a Senior Researcher at the “Titu Maiorescu” Institute of Social Sciences and Humanities of the Romanian Academy,

Timișoara Branch, and a leading archaeologist at the Arad Museum. His research is deeply rooted in the Copper and Bronze Ages of the Carpathian Basin, with a particular focus on the Late Bronze Age. He is extensively involved in the study of prehistoric landscapes, settlements, and funerary practices in Western Romania and Romanian Banat. Mr. Sava has directed and participated in numerous excavations, contributing significantly to the understanding of social complexity and material culture during the second millennium BC in the Lower Mureș region.

Miloš Spasić, PhD, is a Senior Curator and Head of the Prehistoric Collection at the Belgrade City Museum. He earned his doctorate from the University of Belgrade's Faculty of Philosophy in 2016, with a dissertation focusing on animal representations within the Late Neolithic Vinča culture. His research is primarily dedicated to the Neolithic and Chalcolithic archaeology of the Balkans, with a strong emphasis on material culture studies and the symbolic dimensions of prehistoric art. In addition to his curatorial work, he serves as a member of the editorial board for the *Annual of the City of Belgrade*, contributing to the preservation and promotion of the region's ancient heritage.

Andrei Staviță, PhD, is a Senior Lecturer at the West University of Timișoara, within the Faculty of Letters, History, and Theology. He earned his doctorate from Valahia University of Târgoviște with a dissertation focused on the Bronze Age in the Vinga Plain through the lens of landscape archaeology. Following his doctoral studies, he completed a postdoctoral fellowship at the West University of Timișoara, specialising in the Bronze Age, Early Iron Age, and the protection of archaeological heritage in the Banat region. His academic work and teaching cover a wide range of subjects, including prehistoric Europe, archaeological excavation techniques, topography, and cartography. Beyond his research, Mr Staviță is actively involved in cultural entrepreneurship and the management of archaeological heritage, bridging the gap between academic research and the practical preservation of historical sites.

Nenad N. Tasić, PhD, is a Full Professor at the University of Belgrade's Faculty of Philosophy. He earned his doctorate in 1997 with a dissertation on the chronology of the Starčevo culture and has served as the director of excavations at the world-renowned site of Vinča-Belo Brdo

since 1998. Professor Tasić is a pioneer in the application of information technologies in Serbian archaeology, having founded the Centre for Digital Archaeology in 2004. His research interests span the social and economic dimensions of Neolithic life, geophysical prospection, and absolute dating methods, alongside a dedicated commitment to heritology and the popularisation of cultural heritage.

Selena Vitezović, PhD, is a Principal Research Fellow at the Institute of Archaeology in Belgrade. She specialises in the prehistory of South-Eastern Europe, with a particular focus on the Mesolithic, Neolithic, and Eneolithic periods. Her research is primarily centred on prehistoric technology and economics, where she is a leading expert in the analysis of osseous industries, including the study of technological choices, manufacturing processes, and the organisation of production and trade. Furthermore, her work explores the symbolic dimensions of past communities through the investigation of ornaments and the complex relationships between humans and animals. By examining a vast range of prehistoric sites across the region, she provides significant insights into the socio-economic and cultural development of early European societies.

Vesna Vučković, PhD, is a Museum Advisor at the Regional Museum of Paraćin, where she heads the Archaeology Department. She earned her doctorate at the Universitat Autònoma de Barcelona, Spain, with a thesis focused on Neolithic economy and macro-lithic tools within the Central Balkans. Her research interests are primarily oriented towards palaeoeconomy, petrology, and the study of ground stone technology, with a particular emphasis on macro and micro use-wear analysis. By applying the *chaîne opératoire* approach to the study of stone axes and other lithic artefacts, she provides significant insights into the technological and economic strategies of prehistoric Balkan communities.

Lela Vujošević is a sociologist and the Secretary of the Centre for Scientific Research of the Serbian Academy of Sciences and Arts (SANU) and the University of Kragujevac. She graduated in Sociology from the Faculty of Philosophy, University of Belgrade. Her professional work spans over forty scientific and expert papers covering a wide range of disciplines, including historiography, feminism, cultural studies, and contemporary issues in higher education. Based in Kragujevac, she is actively

involved in numerous research projects and scientific conferences, contributing both to academic journals and regional media through her extensive publicistic work.

Piotr Włodarczak, PhD, Dr. Habil., is a Professor at the Institute of Archaeology and Ethnology of the Polish Academy of Sciences. A leading specialist in the Eneolithic and Early Bronze Age of Europe, his research focuses on the complex dynamics of barrow (kurgan) cultures and the Bell Beaker phenomenon. He currently leads major international projects, including “The Danubian Route of the Yamnaya Culture”, which investigates the westernmost migrations of steppe communities into the Vojvodina region of Serbia. In collaboration with the Museum of Vojvodina, he has directed excavations at significant sites such as “Ciganska humka” in Šajkaš and “Medisova humka” in Žabalj. His work integrates advanced bioarchaeological methods, including radiocarbon dating, genetic (aDNA), and isotope analyses, to reconstruct the social and migratory patterns of the 4th and 3rd millennia BC across the Balkans and the Carpathian Basin.

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Aleksandar Simić

Text editing

Uroš Rajčević

Translation

Marina Adamović Kulenović, Dragana Filipović

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This volume is dedicated to Nikola Tasić, an eminent Serbian archaeologist, a full member of the Serbian Academy of Sciences and Arts (SASA), Director of the Institute for Balkan Studies SASA, and Vice-President of SASA. The papers in this collection span a diverse range of periods, from the Palaeolithic, through the Neolithic and Bronze Age, to Late Antiquity and the Middle Ages, reflecting the immense academic breadth of Nikola Tasić's work. The contributors are distinguished experts from Serbia and across Europe; many were friends, colleagues, or students of Nikola Tasić, to whom they warmly dedicate this volume.

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